

INDEX NAME

L3 NUMBER 10 of 12 CAPSUS CONTENT 2010 ACS on STN
ACCESSION NUMBER: 196149542 CAPSUS FULL-TEXT
DOCUMENT NUMBER: 681934
ORIGINAL REFERENCE NO.: 681494,1024a
TITLE: Band assignment problems in the uv spectra of tertiary phosphines (diisopropylamino)di(phenylphosphino)phosphines
AUTHOR(S): Schindlauer, Hellmuth; Hilsenauer, Volker
CORPORATE SOURCE: Tech. Hochschule, Vienna, Austria
SOURCE: Monatshefte fuer Chemie (1971), 98(4), 1394-200
CODEN: MOCHAM
DOCUMENT TYPE: Journal
LANGUAGE: German
AB The uv spectra of phosphine $P(R_2)(C_6H_5)_2$ (where $n = 1-4$) and their oxides are reported. They are compared with $P(R_2)_3$ and $P(R_2)_2O$. They show a bathochromic shift, which is more pronounced upon introduction of two PhP_2 groups into of Ph_3P groups.
IT 4129-45-7 CAPSUS
Title File (Properties):
Spectrum (visible and uv) of, bathochromic shifts in
COD 4129-45-7 CAPSUS
SM Phosphine oxide, 1,1'-(1,1'-biphenyl)-4,4'-diylbis[1,1-diphenyl]- (CA INDEX NAME)



L3 NUMBER 11 of 12 CAPSUS CONTENT 2010 ACS on STN
ACCESSION NUMBER: 196149542 CAPSUS FULL-TEXT
DOCUMENT NUMBER: 6819342
ORIGINAL REFERENCE NO.: 6814942
TITLE: Organometallic azides. I. Preparation and reactions of diarylphosphine azides
AUTHOR(S): Baldwin, Roger A.; Matheson, Robert M.
CORPORATE SOURCE: Am. Potash & Chem. Corp., Mullica, CA
SOURCE: Journal of Organic Chemistry (1965), 30(11), 3860-6
CODEN: JOCMAJ 1965: 0022-1263
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A series of new diaryl-phosphine azides, $Ar_2P(O)N_3$, having surprising thermal stability, is prepared in a high yield. Reaction of the phosphine azides with tertiary phosphines provides a new series of compounds, the $Ar_2P(O)N_3$ (diarylphosphonyl)imino phosphoranes, $Ar_2P(O)N_3$, some of which have exceptional thermal and chemical stabilities. The synthesis of several bis tertiary phosphine $Ar_2P(O)N_3$ is also described.
IT 4129-45-7 CAPSUS
Title File (Properties):
Preparation of
COD 4129-45-7 CAPSUS
SM Phosphine oxide, 1,1'-(1,1'-biphenyl)-4,4'-diylbis[1,1-diphenyl]- (CA INDEX NAME)



04 CITING REF CODE: Y THREE ARE 7 CAPSUS RECORDS THAT CITE THIS RECORD (CITINGS)
L3 NUMBER 12 of 12 CAPSUS CONTENT 2010 ACS on STN
ACCESSION NUMBER: 196149547 CAPSUS FULL-TEXT
DOCUMENT NUMBER: 6819347
ORIGINAL REFERENCE NO.: 1912076-g
TITLE: Research and development of high-temperature-stable organophosphorus compounds
AUTHOR(S): Karamanuk, Charles F.; Carlson, Richard D.; Harris, Edward E.; Lissner, Hubert J.
CORPORATE SOURCE: Hooker Chem. Corp., Niagara Falls, NY
SOURCE: United States Department of Commerce, Office of Technical Services, FO Report 1961, CA 263,591, 174 pp.
CODEN: ACTVAL 1961: 0099-8567
DOCUMENT TYPE: Journal
LANGUAGE: Available
AB A series of alkyl- and arylphosphine phosphines and the corresponding phosphine oxides were prepared by modification of existing synthetic methods. Thermal testing by a weight loss and chemical change technique was carried out at 300-450° in N₂. The arylphosphine phosphines and phosphine oxides are more stable than alkyls, with the tri- and tetraaryls and the neopentyls being the most stable alkyls. The aromatic series appears to begin change by losing ring H with subsequent ring condensation. The alkyls all seem to produce P=O structures or, in the case of phosphines, P=O and products before the end. A thermal study of simple arylphosphines and arylphosphine oxides and sulfides yielded some clues to decomposition routes, which with the above data allow some tentative suggestions on mechanisms. 351 references
IT 4129-45-7 CAPSUS
Title File (Properties):
Thermal stability of
COD 4129-45-7 CAPSUS
SM Phosphine oxide, 1,1'-(1,1'-biphenyl)-4,4'-diylbis[1,1-diphenyl]- (CA INDEX NAME)



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---Logging off of STN---

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Executing the logoff script...
=> LOG T
=>
(FILE 'HOME' ENTERED AT 12:55:30 ON 25 MAR 2010)
(FILE 'REGISTRY' ENTERED AT 12:55:30 ON 25 MAR 2010)
L2 STRUCTURE UPLOADED
L2 6 SEA FILE:REGISTRY 888 FUL L1
(FILE 'CAPSUS' ENTERED AT 12:56:14 ON 25 MAR 2010)
L3 12 SEA FILE:CAPSUS SPEW=ON ARB=ON PLO=ON L2
0 1919 ARE NITZER 1-
=> file registry
=>
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chain nodes :
19
ring nodes :
3 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
chain bonds :
4-19 11-19 14-19
ring bonds :
1-2 1-6 2-3 3-4 4-5 6-7 7-8 7-12 8-9 9-10 10-11 11-12 13-14 13-18 14-15
15-16 16-17 17-18
exact bonds :
4-19 11-19 14-19
normalized bonds :

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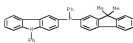
Match level 1
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:CLASS
15-16 16-17 17-18

L1 STRUCTURE UPLOADED
=> # 11 sea full
FULL SEARCH INITIATED 15:49:17 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 365748 TO ITERATE
100.0A PROCESSED 365748 ITERATIONS 194135 ANNNERS
SEARCH TIME: 00.00.02

L2 194135 SEA SSS FUL L1
=> file caplus
=> # 12
L3 119523 L2
=> 13 and (electroluminescent or electroluminescence or (light emitting) or OLED)
93244 ELECTROLUMINESCENT
8 ELECTROLUMINESCENTS
93247 ELECTROLUMINESCENT
ELECTROLUMINESCENT OR ELECTROLUMINESCENTS
27055 ELECTROLUMINESCENTS
30 ELECTROLUMINESCENTS
27060 ELECTROLUMINESCENTS
ELECTROLUMINESCENT OR ELECTROLUMINESCENTS
5 ELECTROLUMINESCENTS
27061 ELECTROLUMINESCENTS
ELECTROLUMINESCENT OR ELECTROLUMINESCENTS
135881 LIGHT
12574 LIGHT
136306 LIGHT
LIGHT OR LIGHTS
146606 KNITTING
234 KNITTINGS
146652 KNITTING
KNITTING OR KNITTINGS
79378 LIGHT KNITTING
LIGHT OR KNITTING
7825 OLED
3875 OLED
9790 OLED
VOID OR OLED
1263 L2 AND (ELECTROLUMINESCENT OR ELECTROLUMINESCENT OR LIGHT ENIT
KNITTING OR OLED)
=> 14 and (electron transporting) or (electron injecting) or (electron transport)
or (electron injection)
160392 ELECTRON
296130 ELECTRON

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RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (fluorene-based compound and organic electroluminescence display
 device using the same)

[illegible]

OS CITING REF COUNT: 6 THERE ARE 6 CAPUS RECORDS THAT CITE THIS RECORD
(9 ATTACHED)

LE AMMER & 1/5 CARLOS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 2005/962280 CARLOS Full-text
DOCUMENT NUMBER: 143/27648
TITLE: Organic electronic devices
INVENTOR(S): Gerhard, Anja; Vestweber, Horst; Stoessel, Philipp
PATENT ASSIGNER(S): Covion Organic Semiconductors G.m.b.H., Germany
SOURCE: Ger. Offen., 33 pp.
CODES: GKXKXK
DOCUMENT TYPE: Patent
LANGUAGES: German
FAMILY ACC. NUM. COUNT: 1

OTHER SOURCE(S) :

Organic electronic devices comprising an anode, a cathode, and an organic layer are described in which the device does not incorporate any phosphorescent emitters and the organic layer incorporates at least one non-emitting compound having a mol. weight of 150-10000 g/mol and including structural units of at least one of the following groups: (A) C_6H_4 , (B) C_6H_2 , (C) C_6H_3 , (D) C_6H , (E) C_6H_5 , (F) C_6H_6 , (G) C_6H_7 , (H) C_6H_8 , (I) C_6H_9 , (J) C_6H_{10} , (K) C_6H_{11} , (L) C_6H_{12} , (M) C_6H_{13} , (N) C_6H_{14} , (O) C_6H_{15} , (P) C_6H_{16} , (Q) C_6H_{17} , (R) C_6H_{18} , (S) C_6H_{19} , (T) C_6H_{20} , (U) C_6H_{21} , (V) C_6H_{22} , (W) C_6H_{23} , (X) C_6H_{24} , (Y) C_6H_{25} , (Z) C_6H_{26} , (AA) C_6H_{27} , (AB) C_6H_{28} , (AC) C_6H_{29} , (AD) C_6H_{30} , (AE) C_6H_{31} , (AF) C_6H_{32} , (AG) C_6H_{33} , (AH) C_6H_{34} , (AI) C_6H_{35} , (AJ) C_6H_{36} , (AK) C_6H_{37} , (AL) C_6H_{38} , (AM) C_6H_{39} , (AN) C_6H_{40} , (AO) C_6H_{41} , (AP) C_6H_{42} , (AQ) C_6H_{43} , (AR) C_6H_{44} , (AS) C_6H_{45} , (AT) C_6H_{46} , (AU) C_6H_{47} , (AV) C_6H_{48} , (AW) C_6H_{49} , (AX) C_6H_{50} , (AY) C_6H_{51} , (AZ) C_6H_{52} , (BA) C_6H_{53} , (BB) C_6H_{54} , (BC) C_6H_{55} , (BD) C_6H_{56} , (BE) C_6H_{57} , (BF) C_6H_{58} , (BG) C_6H_{59} , (BH) C_6H_{60} , (BI) C_6H_{61} , (BJ) C_6H_{62} , (BK) C_6H_{63} , (BL) C_6H_{64} , (BM) C_6H_{65} , (BN) C_6H_{66} , (BO) C_6H_{67} , (BP) C_6H_{68} , (BQ) C_6H_{69} , (BR) C_6H_{70} , (BS) C_6H_{71} , (BT) C_6H_{72} , (BU) C_6H_{73} , (BV) C_6H_{74} , (BW) C_6H_{75} , (BX) C_6H_{76} , (BY) C_6H_{77} , (BZ) C_6H_{78} , (CA) C_6H_{79} , (CB) C_6H_{80} , (CC) C_6H_{81} , (CD) C_6H_{82} , (CE) C_6H_{83} , (CF) C_6H_{84} , (CG) C_6H_{85} , (CH) C_6H_{86} , (CI) C_6H_{87} , (CJ) C_6H_{88} , (CK) C_6H_{89} , (CL) C_6H_{90} , (CM) C_6H_{91} , (CN) C_6H_{92} , (CO) C_6H_{93} , (CP) C_6H_{94} , (CQ) C_6H_{95} , (CR) C_6H_{96} , (CS) C_6H_{97} , (CT) C_6H_{98} , (CU) C_6H_{99} , (CV) C_6H_{100} , (CW) C_6H_{101} , (CX) C_6H_{102} , (CY) C_6H_{103} , (CZ) C_6H_{104} , (DA) C_6H_{105} , (DB) C_6H_{106} , (DC) C_6H_{107} , (DD) C_6H_{108} , (DE) C_6H_{109} , (DF) C_6H_{110} , (DG) C_6H_{111} , (DH) C_6H_{112} , (DI) C_6H_{113} , (DJ) C_6H_{114} , (DK) C_6H_{115} , (DL) C_6H_{116} , (DM) C_6H_{117} , (DN) C_6H_{118} , (DO) C_6H_{119} , (DP) C_6H_{120} , (DQ) C_6H_{121} , (DR) C_6H_{122} , (DS) C_6H_{123} , (DT) C_6H_{124} , (DU) C_6H_{125} , (DV) C_6H_{126} , (DW) C_6H_{127} , (DX) C_6H_{128} , (DY) C_6H_{129} , (DZ) C_6H_{130} , (EA) C_6H_{131} , (EB) C_6H_{132} , (EC) C_6H_{133} , (ED) C_6H_{134} , (EE) C_6H_{135} , (EF) C_6H_{136} , (EG) C_6H_{137} , (EH) C_6H_{138} , (EI) C_6H_{139} , (EJ) C_6H_{140} , (EK) C_6H_{141} , (EL) C_6H_{142} , (EM) C_6H_{143} , (EN) C_6H_{144} , (EO) C_6H_{145} , (EP) C_6H_{146} , (EQ) C_6H_{147} , (ER) C_6H_{148} , (ES) C_6H_{149} , (ET) C_6H_{150} , (EU) C_6H_{151} , (EV) C_6H_{152} , (EW) C_6H_{153} , (EX) C_6H_{154} , (EY) C_6H_{155} , (EZ) C_6H_{156} , (FA) C_6H_{157} , (FB) C_6H_{158} , (FC) C_6H_{159} , (FD) C_6H_{160} , (FE) C_6H_{161} , (FF) C_6H_{162} , (FG) C_6H_{163} , (FH) C_6H_{164} , (FI) C_6H_{165} , (FJ) C_6H_{166} , (FK) C_6H_{167} , (FL) C_6H_{168} , (FM) C_6H_{169} , (FN) C_6H_{170} , (FO) C_6H_{171} , (FP) C_6H_{172} , (FQ) C_6H_{173} , (FR) C_6H_{174} , (FS) C_6H_{175} , (FT) C_6H_{176} , (FU) C_6H_{177} , (FV) C_6H_{178} , (FW) C_6H_{179} , (FX) C_6H_{180} , (FY) C_6H_{181} , (FZ) C_6H_{182} , (GA) C_6H_{183} , (GB) C_6H_{184} , (GC) C_6H_{185} , (GD) C_6H_{186} , (GE) C_6H_{187} , (GF

PATENT NO.		KIND	DATE	APPLICATION NO.	DATE
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WE	102005000601	A1	20050908	WE 2005-051109	2005020118
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ENI	AR, AU, BR, CA, CH, CO, CN, DE, DK, ES, FI, FR, GB, GR, HK, IL, JP, KR, MA, MD, MG, MX, MY, NL, NO, NZ, PL, PT, RU, SE, SG, SI, TH, TR, TW, US, VN, ZA	AR, AU, BR, CA, CH, CO, CN, DE, DK, ES, FI, FR, GB, GR, HK, IL, JP, KR, MA, MD, MG, MX, MY, NL, NO, NZ, PL, PT, RU, SE, SG, SI, TH, TR, TW, US, VN, ZA	AR, AU, BR, CA, CH, CO, CN, DE, DK, ES, FI, FR, GB, GR, HK, IL, JP, KR, MA, MD, MG, MX, MY, NL, NO, NZ, PL, PT, RU, SE, SG, SI, TH, TR, TW, US, VN, ZA	AR, AU, BR, CA, CH, CO, CN, DE, DK, ES, FI, FR, GB, GR, HK, IL, JP, KR, MA, MD, MG, MX, MY, NL, NO, NZ, PL, PT, RU, SE, SG, SI, TH, TR, TW, US, VN, ZA	AR, AU, BR, CA, CH, CO, CN, DE, DK, ES, FI, FR, GB, GR, HK, IL, JP, KR, MA, MD, MG, MX, MY, NL, NO, NZ, PL, PT, RU, SE, SG, SI, TH, TR, TW, US, VN, ZA

IT 724426-21-9
 PU: DEV (Device component use); USES (Uses)
 (organic electronic devices with unsatd. structural unit-containing
 "interconjugated" polymer lig. materials)
 RN 824426-21-9 CAMELUS
 CN Phosphine oxide, phenylbis(9,9'-spirobi[9H-fluorene]-2-yl)- (CA INDEX
 NAME)



08.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(3 CITINGS)

	SY	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	5
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L6 AMHERST 3 OF 19 CAPLUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 20051555947 CAPLUS Full-text
DOCUMENT NUMBER: 143:256770
TITLE:
Method for preparing electrochromophore barrier material and its
electro-glow parts by using oxadiazole-containing
compound
INVENTOR(S): Huang, Wei

PATENT ASSIGNEE(S): Fudan University, P. Rep. China
SOURCE: Faming Zhuanli Shengxing Gongsi Shuomingsu, No pp
given
CODEN: CMOKEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC NUM. COUNT: 1
PATENT INFORMATION:

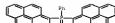
PATENT ASSIGNEE(S):	Daiwa
SOURCE:	Tosny Industries, Inc., Japan Jpn Kokai Tokkyo Koho, 16 pp. CODEN: JOCXAF
DOCUMENT TYPE:	Patent
LANGUAGE:	Japanese
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1546477	A	20041117	CN 2003-101090B2	20031204 <---
OTHER SOURCE(S):		MANPAT 143:256770	CN 2003-101090B2	20031204

PATENT NO.	KIND	DATE	APPLICATION NO	DATE
JP 2005093425	A	20050407	JP 2004-233139	20040810
PRIORITY APPLN. INFO.1			JP 2003-207260	20030812

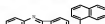
[illegible]

RN T21969-93-3 CAPLUS
CN Phenazine oxide, phenyldi-[1-methyl]- (CA INDEX NAME)



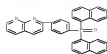
oxadiazole-containing compound)
 #N 14221-01-3 CAPLUS
 C# Palladium, tetrakis(triphenylphosphine)-, (T=4)- (CA INDEX NAME)

RN	T21969-96-6	CAPLUS
CN	Quinoxaline, 2-[4-(di-1-naphthalenyl)phosphinyl]phenyl]-	(CA INDEX NAME)

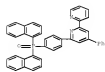


L6 ANSWER 6 OF 209 CAPLUS COPYRIGHT 2010 ACS on STM
 ACCESSION NUMBER: 2005:302703 CAPLUS Full-text
~~DOI:10.1002/1522-2675(20050301)148:3<140::AID-ANGL140>3.0.CO;2-1~~
 TITLE: Organic electroluminescence device
 INVENTOR(S): Miyama, Seiichiro; Tomimaga, Takahiro; Kitayama,

RN T24755-84-4 CAPLUS
 CN 1,8-Bisphthyridine, 2-[4-(di-1-naphthalenylphosphinyl)phenyl]- (CA INDEX NAME)



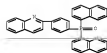
NO 724155-55-5 CAPLOS
 CH 2,2'-Bipyridine, 6-[4-(di-1-naphthalenylphosphonyl)phenyl]-4-phenyl- (CA INDEX NAME)



NO 724155-56-6 CAPLOS
 CH 2,2'-Bipyridine, 2-[4-(di-1-naphthalenylphosphonyl)phenyl]-5-phenyl- (CA INDEX NAME)



NO 549291-56-1 CAPLOS
 CH Quinoline, 2-[4-(di-1-naphthalenylphosphonyl)phenyl]- (CA INDEX NAME)



emission at room temperature, at least one lanthanide ion bidentate ligand coordinated through a N on a tetraaza ring and a C, and at least one end ligand selected from a hydride and a ligand coordinated through a C atom which is part of an aromatic group. The electronic device of the invention includes a photoactive layer, electrode and/or an electron transport layer that contains the organometallic complex described above.

17 (9:11)-(5:5)
 ALI DEV (Device component use); USES (Use)
 (Ph pyridine transition metal complex as phosphorescent material)
 NO 549173-56-5 CAPLOS
 CH Iridium, ethere[3,3-difluoro-2-(4-methyl-2-pyridyl)-4(phenyl)-
 w[hydroxycarbonyl]phenyl]- (DCI) (CA INDEX NAME)



08 CITING REF COUNT: 4 THERE ARE 4 CAPLOS RECORDS THAT CITE THIS RECORD
 (5 CITINGS)
 REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

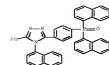
16 ANKWER 8 OF 109 CAPLOS COPYRIGHT 2010 ACS on STM
 ACCESSION NUMBER: 2005102193 CAPLOS Full-Text

DOCUMENT NUMBER: 142126234
 TITLE: Ph-ph-ph-ph devices based on hyperbranched polymers with lanthanide ions
 Inventor(s): Vukobratovic, Aleksa; Kravtchikov, Sergei
 Patent Assignee(s): Altair Center, Inc., USA
 SOURCE: U.S. Pat. App. Publ., 18 pp.
 COCKER: US2007
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005001729	A1	20050127	US 2003-425301	20030722 <--

PRIORITY APPAL INFO 1
 NO Multilayered light-emitting devices formed on transparent substrate which comprise an active emitting layer, a hole-injecting electrode, a hole transfer layer, and a hole blocking layer. The active layer comprises organic or organometallic materials having a band with good energy accepting properties and high light emitting efficiency embedded into a periphery with high electronic excitation and energy donating properties, enabling electron and hole charge carriers producing emitting states via the electronic recombination process followed by electronic excitation energy transfer from the periphery to the locus (antenna effect) and converting the energy into the emitting light are described in which the

NO 549093-3-3 CAPLOS
 CH 4H-1,2,4-Triazole, 3-[4-(di-1-naphthalenylphosphonyl)phenyl]-4-(1'-naphthalenyl)-5-phenyl- (CA INDEX NAME)



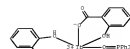
16 ANKWER 7 OF 109 CAPLOS COPYRIGHT 2010 ACS on STM
 ACCESSION NUMBER: 2005102193 CAPLOS Full-Text
 DOCUMENT NUMBER: 142126232
 TITLE: Phosphorescent material
 Inventor(s): Herron, Doreen; Radu, Nora; Dobina, Math; Eric
 Mourlyoung, Ming; Ting
 Patent Assignee(s): S. I. Du Pont De Nemours and Company, USA
 SOURCE: U.S. Pat. App. Publ., 13 pp.
 COCKER: US2007
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050408312	A1	20050303	US 2003-450323	20030828 <--
US 7330730	B2	20070403		
NO 2005012179	A1	20050310	NO 2004-0228163	20040827 <--

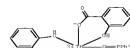
17 (9:11)-(5:5)
 ALI DEV (Device component use); USSES (Use)
 (Ph pyridine transition metal complex as phosphorescent material)
 NO 549173-56-5 CAPLOS
 CH Iridium, ethere[3,3-difluoro-2-(4-methyl-2-pyridyl)-4(phenyl)-
 w[hydroxycarbonyl]phenyl]- (DCI) (CA INDEX NAME)

locus complex lanthanide 3+ ions, the periphery has hyperbranched dendrimer-like architecture providing efficient energy transfer, and special separation of the hyperbranched locus centers is ensured to prevent concentration quenching of their luminescence light emission (shell-effect).

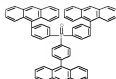
17 (9:11)-(5:5)
 ALI DEV (Device component use); USSES (Use)
 (Ph pyridine transition metal complex as phosphorescent material)
 NO 549173-56-5 CAPLOS
 CH Iridium, ethere[3,3-difluoro-2-(4-methyl-2-pyridyl)-4(phenyl)-
 w[hydroxycarbonyl]phenyl]- (DCI) (CA INDEX NAME)



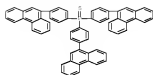
NO 691009-3-3 CAPLOS
 CH Terbium, tri[2-(hydroxy-4-benzyloxy-4-oxo-1-phenyl)phosphine
 oxide-4-yl]- (CA INDEX NAME)



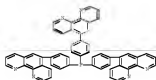
16 ANKWER 9 OF 109 CAPLOS COPYRIGHT 2010 ACS on STM
 ACCESSION NUMBER: 2005102193 CAPLOS Full-Text
 DOCUMENT NUMBER: 142126054
 TITLE: Electrophosphorescence emission in organic



HN 620330-66-8 CAPLOS
CN Phosphine sulfide, tris[4-(9-phenanthrenyl)phenyl]- (CA INDEX NAME)



HN 620630-56-0 CAPLOS
CN 1,10-Phenanthroline, 5,5',10,10'-bis(phosphindimethyl-4,1-phenylene)tris- (PCI) (CA INDEX NAME)



HN 620630-57-1 CAPLOS
CN Phosphine, tris[2,6-dimethyl-4-(9-phenanthrenyl)phenyl]- (CA INDEX NAME)



IT 5143-1-4, 4-Bromophenyltriphenylphosphonium bromide
(9-9'-1,1',3'-Bromophenyltriphenylphosphonium bromide
RI: RCT (Reactant) RACT (Reactant or reagent)
Loop-white-emitting organic LED containing anacrylate phosphorophore
deposits and showing high luminescent efficiency)
HN 5104-1-10-4 CAPLOS
CN Phosphonium, [(4-bromophenyl)methyl]triphenyl-, bromide (1:1) (CA INDEX NAME)



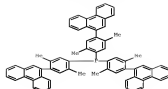
HN 91902-10-6 CAPLOS
CN Phosphonium, [(3-bromophenyl)methyl]triphenyl-, bromide (1:1) (CA INDEX NAME)



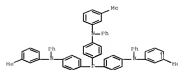
ON CITING REF COUNT: 9 THERE ARE 9 CAPLOS RECORDS THAT CITE THIS RECORD
IN 22700000

LE NUMBER 12 OF 109 CAPLOS COPYRIGHT 2010 ACP OR BTH
ACCESSION NUMBER: 620166348 CAPLOS FULLTEXT
1411322545
DOCUMENT NUMBER:
TITLE:
Synthesis and characterization of new light-emitting copolymers in polymer LEDs

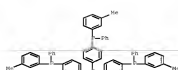
AUTHOR(S):
Wu, Sheng-Meng; Shen, Chi-Hsiang; Chen, Jia-Rung; Hsu, Chia-Chen; Yang, Raymond Chien-Chao
DEPARTMENT OF CHEMICAL ENGINEERING, NATIONAL CHIAO CHUNG UNIVERSITY, CHIAI, 611, TAIWAN
JOURNAL OF POLYMER SCIENCE, PART A: POLYMER CHEMISTRY (2010), 48(16), 3954-3966
CODEN: JPACGJ; 1950-0874-6246



HN 620630-10-2 CAPLOS
CN Bisoxazoline, 4,4',4''-bis(phosphindimethyl-10-13-methylphenyl)-10-phenyl- (PCI) (CA INDEX NAME)

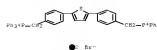


HN 620630-19-1 CAPLOS
CN Phosphine, tris[4-(13-methylphenyl)phenylphosphino]phenyl]- (CA INDEX NAME)



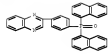
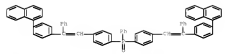
HN 620630-31-7 CAPLOS
CN Phosphine, [1,1'-biphenyl]-4,4''-diylbis[1-(8-methylphenyl)phenyl]- (PCI) (CA INDEX NAME)

PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A series of thiophene-containing photoactive copolymers consisting of alternating conjugated and nonconjugated segments were synthesized. The IR, NMR spectra corroborated the well-defined structures, and the copolymers not only were soluble in common organic solvents but also had high glass-transition temps. (ca. 150°) and good thermal stability up to 350°. Introducing aliphatic functional groups, such as alkyl or alkenyl, into the chromophore of the copolymers red shifted the photoluminescence spectra and lowered the optical bandgaps. The electrochromic bandgaps calculated from cyclic voltammetry agreed with the optical bandgaps and that indicated that the copolymers were in the same excited state. The energy levels (HOMO and LUMO) of all the copolymers were lower than those of poly[2-methyl-5-(2'-methylhexyloxy)-1,4-phenylenevinylene] (MEH-PPV), indicating balanced hole and electron transport, which led to improved performance in both single-layer and double-layer polymer light-emitting diode devices fabricated with these copolymers. All the copolymers emitted blue-green or green light above the threshold bias of 5.5 V under ambient conditions. At the maximum bias of 10 V, the electroluminescence of a device made of poly[2-(4-(2-(2-methoxyphenyl)ethynyl)phenyl)-5-(4-(2-(2-methoxy-4,1,8-octadecanediyl)phenyl)ethynyl)phenyl)thiophene] (P2-4-1,8) was 5016 cd/m². The external quantum efficiency decreased with the lifetime as the polymer degraded.
IT 1143-1-10-4
RI: RCT (Reactant); SEN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(monomer) preparation and polymerization of diphenylthiophene and dibenzaldehyde
HN 710720-47-1 CAPLOS
CN Phosphonium, [2,5-thiophenediylbis[4,1-phenylene]thiylene]bis[triphenyl-, dibromide (1:1)] (CA INDEX NAME)



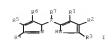
IT 1143-1-10-4
RI: SEN (Device component use); PREP (Properties); SEN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation and characterization of thiophene-containing photoactive copolymers)
(in polymer light-emitting diode device fabrications)
HN 710720-47-1 CAPLOS
CN Phosphonium, [2,5-thiophenediylbis[4,1-phenylene]thiylene]bis[triphenyl-, dibromide, polymer with 4,4'-(1,8-octadecanediyl)bis[3-ethoxybenzaldehyde] (PCI) (CA INDEX NAME)
CN 3

oxide Ar₁Ar₂Ar₃Ar₄Ar₅ (Ar₁-Ar₅ = (hetero)aryl essentially including a-naphthyl group and fluorescent or charge-transporting skeleton).

[illegible]

PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn Kokai Tokkyo Koho, 53 pp
DOCUMENT TYPE: Patent; JBCJAF
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004200162	A	20040715	JP 2003-60719	20031205
PRIORITY APPL: INFO :			JP 2002-353461	A 20021205
OTHER SOURCE(S) :	MARPAT	141,131039		

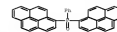


AB The invention relates to a electroluminescent device, suited for use in making a white light-emitting device, comprising an ~~electroluminescent~~ layer containing a pyrrhthene compound or its metal complex, represented by I ($R^1 = H$, alkyl, cycloalkyl, etc., $X = N$ and C , when $X = H$, then $R^2 = null$), and an emission transport layer having the ionization potential ≤ 5.8 eV. The metal forming the complex with the pyrrhthene compound I is selected from Be, Mg, Ca, Sr, Ba, Cu, Zn, and Pt.

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IT  08, 09, C2, 24, C5, H2, C6, 25, and 26.
    72159-93-3  1,11,200-CG-06
    RL: DEV (Device component use); TEN (Technical or engineered material
        use); USES (Uses)
        (electro transportive material; organic
        electrochromic device)
RN  72166-93-3  CAPLUS
CN  Phosphine oxide, phenylidi-1-pyrenyl- (CA INDEX NAME)

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4-N	Quinoxaline, 2-[4-(di-1-naphthalenyl)phosphoryl]phenoxy]-	ICA INDEX NAME
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08.CITING REF COUNT: 25  THERE ARE 25 CAPLUS RECORDS THAT CITE THIS
                        RECORD (26 CITINGS)
REFERENCE COUNT: 72     THERE ARE 72 CITED REFERENCES AVAILABLE FOR THIS
                        RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMATS
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[illegible]

LE ANNNR 19 OF 10 CAPLOS COPYRIGHT 2010 ACS ON STM
2004/4/23/933 CAPLOS Full-
14115472
Enhancement of efficiency in luminescent polymer by
incorporation of conjugated 1,3,4-oxadiazole side
chains as hole-blocker/electron-transporter
Kim, Soo Hyun; Lee, Moonung
Department of Chemistry, Sogang University, Seoul,
121-742, S Korea
Synthetic Metals (2004), 143(1), 13-19
CODEN: SMEDG; ISSN: 0379-6779
Elsevier Science B.V.
Journal

$$\text{HO}-(\text{CH}_2)_{11}-\text{O}-\text{C}_6\text{H}_2-\text{O}-(\text{CH}_2)_{11}-\text{HO}$$
$$\begin{array}{c} \text{Ph} \\ | \\ \text{Ph}-\text{C}-\text{Ph} \end{array}$$

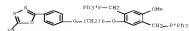
LE ANSWER 20 OF 209 CARLUS CONVENT 2010 ACS ON STM
 ACCESSION NUMBER: 2004-027211 CARLUS Pullstart
 DOCUMENT NUMBER: 140131569
 TITLE: Organic ~~and~~ ~~non~~ ~~organic~~ compositions
 INVENTOR(S): Lunnery, Sergey A.; Bastard, John P.; McCormick,
 Fred S.; Nirmal, Manoj; Roberts, Ralph R
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 51 pp
 COUNTRY: US/CA/UK
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC NUM COUNT: 1
 ADDITIONAL INFORMATION:

OXD units do not affect the emission maximum of the main chain comparison with PPV-PPV. The pendants block the injection holes from the anode and enhance the electron-accepting property.

1,2-*trans*-9,10
R1: RCT (Reactant); SPH (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(monomer; preparation of luminescent polyphenylenevinylene polymer by incorporation of conjugated azobenzene side chains as hole-blocker/electron-transporter)

108259-59-0 CARBOS
Phosphonium, [12-methoxy-5-[6-[[6-[[5-phenyl]-3,3'-oxydiphenyl]-2-[[4-phenyl]ethynyl]-1,4-phenylene]bis(methylene)]bis(triisopropyl-dichloro diester) (PCT) (CA INDEX NAME)



PL: PPF (Preparation); SPN (Synthetic preparation); PPF (Preparation)
(preparation of luminescent polythienylenevinylene polymer by incorporation
of conjugated oxadiazole side chains as

CM 1

O=C1NC(=O)C(=O)N1c2ccc(OCCCCCCCCOc3ccc(COC(=O)C(F)(F)F)cc3)cc2

CM 2

CH 1

CRN 123415-45-
CMT C12 M5A Q4

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AD 2003034084      AI      20041126      AD 2003034084      20030915  <--
EP 151363         EP      20030517      EP      20030517      20030915  <--
      IE, SI, SE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, UK, PT,
      IE, SI, LT, LU, FI, RO, MN, CY, AL, TR, BG, CZ, EE, HU, SK
CN 1661903         A      20051012      CN 2003042243      20030915  <--
CN 100357388      C      20011226
JP 200610230      T      20060323      JP 20040457103      20030915  <--
CN 100357388      C      20011226      JP 2005024423      A      20030925  <--
JP 200610230      T      20060323      WO 2005082907      A      20030915  <--
PRIORITY INFO.    INFO.

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSSUS DISPLAY FORMAT
OTHER SOURCE(S):   MARPAT 16131669

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[illegible]

CM Phosphonium, methylenetriphenyl-, bromide (1:1) (CA INDEX NAME)

Ph
|
PTM—C₆₀—M
|
Ph

● 54

00:CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITINGS)

L6 ANSWER 21 OF 109 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2004:257767 CAPLUS Full Text
DOCUMENT NUMBER: 141:44623

AUTHOR(S): Xie, Hao; Sun, Min; Wang, Ke Zhi; Shang, Yong An; Jin, Lin Wei; Shang, Chun Hai
CORPORATE SOURCE: State Key Laboratory of Rare Earth Materials Chemistry and Applications, Department of Chemistry, Peking University, Beijing 100871, Peop. Rep. China
SOURCE: Chemical Physics Letters (APL), 398(1-3),
55-57
CODEN: CHEMPLAC; ISSN: 0009-2614
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

	device	expl
RM	59625-59-1	CAR

CH Phosphine, 1-[(4-(trifluoromethyl)phenyl)amino]triphenyl- (CA INDEX NAME)



05 CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

16 NUMBER 24 OF 109 CAPLUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 2004171325 CAPLUS [Full-text](#)
DOCUMENT NUMBER: 14014294
TITLE: Novel efficient green synthesis of conjugated polymers based on fluorene and triaryldiphenylacetone for light-emitting diodes
AUTHOR(S): Peng, Qiang; Liu, Shi-Tong; Huang, Yang Xie, Ming-Gui
CORPORATE SOURCE: King, Hong; Bao, Jun-Biao; Cao, Yang
CONFERENCE SOURCE: Department of Chemistry, Sichuan University, Chengdu, 61004, P.R.P. China
SOURCE: Journal of Materials Chemistry (2004), 14(10), 396-401
CODING AGENCY: USAN: 9939-9420
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Novel triaryldiphenylacetone conjugated polymers based on fluorene and triaryldiphenylacetone were synthesized in good yield through Suzuki coupling reactions. The resulting polymers were characterized by NMR, FTIR, elemental analysis, DSC, TGA and GPC. These polymers possess excellent thermal stability with glass transition temps. (Tg) of 30-342° and onset decomposition temps. (Td) of 376-397°. Cyclic voltammetry studies revealed that these polymers have good hole and electron transporting properties with LUMO energy levels of -1.97 to -2.30 eV and HOMO energy levels of -5.71 to -5.81 eV. All the polymers emit green fluorescence with very high photoluminescence (PL) quantum yields of 43-59%. Polymer 1-(4-trifluoromethyl)phenyl diode (P1) with the configuration ITO/PEDOT/polymer/BAI with high maximum external quantum efficiency of 0.3-0.53% and low turn-on blue voltages. The good triaryldiphenylacetone conjugated polymers indicate that these polymers are new and promising candidates for electroluminescent materials that can be used to fabricate efficient polymer light-emitting diodes.

II 1421-02-3 CAPLUS
RI: RCT (Reactant); RCT (Reactant or reagent)
(green electroluminescent) conjugated polymers based on fluorene and triaryldiphenylacetone for light-emitting diodes and their phys. properties
CA: Full-text, tetraakis(trifluoromethyl)phosphine, (P-4)- (CA INDEX NAME)

AB Full-text, tetraakis(trifluoromethyl)phosphine, (P-4)- (CA INDEX NAME)

05 CITING REF COUNT: 16 THERE ARE 16 CAPLUS RECORDS THAT CITE THIS RECORD (16 CITINGS)
REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

16 NUMBER 25 OF 109 CAPLUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 2004171325 CAPLUS [Full-text](#)
DOCUMENT NUMBER: 14016003
TITLE: Phenanthrene-Based Conjugated Polymers: Synthesis, Electrochemistry, and Light-Emitting Properties
AUTHOR(S): Hong, Xianming; Kulkarni, Anilashil F.; Jenab, Saman A.
CORPORATE SOURCE: Department of Chemical Engineering and Department of Chemistry, University of Washington, Seattle, WA, 98195-1559, USA
SOURCE: Macromolecules (2005), 38(24), 8992-8999
CODING AGENCY: USAN: 9939-9420
PUBLISHER: Journal
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Two new phenanthrene-containing conjugated polymers, poly[10-(6-phenanthrenyl)-3,7-diyl] (P1) and poly[10-(6-phenanthrenyl)-3,7-diyl-4,9,9-dimethyl-2,7-fluorene] (P2), were synthesized and characterized, and their photophysical, electrochemical, and electrochromic properties were investigated. The optical band gaps of P1 and P2 were 2.53 and 2.76 eV, resp. Both polymers showed greenish-blue photoluminescence (450 nm) in dilute toluene with a fluorescence quantum yield of 0.40. Identical solid-state and dilute solution absorption and emission spectra were observed, showing that molecules were not formed in P1 or P2 in thin films. Duration photostability (8000 cycles) estimated from cyclic voltammetry were 5.0-5.1 eV for the phenanthrene-based polymers, making them good candidates for hole transport materials in devices. Spectroelectrochemistry revealed that the observed multiple oxidation peaks in the cyclic voltammetry of P1 and P2 were associated multiple absorption peaks due to the formation of radical cations (monomer) and dication (biphenylene). Greenish-blue electroluminescence with lifetimes of up to 100 ns/0.2 ns was observed for the P1/P2 organic light-emitting diodes. These results show that the phenanthrene ring is an excellent building block for lowering the ionization potential and for impeding π -stacking aggregation and exciton formation in conjugated polymers.

II 1421-02-3 CAPLUS
RI: CRYSTAL (Crystal); CRYSTAL (Crystal)
(polymerization catalyst) preparation and electrochromic and electrochromic properties of phenanthrene-based conjugated polymers and LEDs from them
CA: Full-text, tetraakis(trifluoromethyl)phosphine, (P-4)- (CA INDEX NAME)

AB Full-text, tetraakis(trifluoromethyl)phosphine, (P-4)- (CA INDEX NAME)



05 CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

16 NUMBER 26 OF 109 CAPLUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 2004155392 CAPLUS [Full-text](#)
DOCUMENT NUMBER: 139155518
TITLE: Triaryl element for electroluminescent devices
INVENTOR(S): Hsieh, Benjamin P.; Conley, Scott R.; Kondakov, Denis V.; Ovsienko, Zhayla; Zhayla, R.; Brown, Christopher T.
CORPORATE SOURCE: Eastman Kodak Company, USA
SOURCE: U.S. Pat. Appl. Publ., 26 pp., Cont.-in-part of U.S. Pat. No. 6,960,395, abandoned.
CODING AGENCY: USAN: 9939-9420
PUBLISHER: Patent
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION: Patent

AB Full-text, triaryl element for electroluminescent devices
PATENT INFORMATION: Patent

AB Full-text, triaryl element for electroluminescent devices
PATENT INFORMATION: Patent

AB Full-text, triaryl element for electroluminescent devices
PATENT INFORMATION: Patent



05 CITING REF COUNT: 18 THERE ARE 18 CAPLUS RECORDS THAT CITE THIS RECORD (18 CITINGS)

16 NUMBER 27 OF 109 CAPLUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 2003169198 CAPLUS [Full-text](#)
DOCUMENT NUMBER: 139127445
TITLE: Organic element for electroluminescent devices
INVENTOR(S): Hsieh, Benjamin P.; Kondakov, Denis V.; Conley, Scott R.; Ovsienko, Zhayla; Zhayla, R.; Brown, Christopher T.
CORPORATE SOURCE: Eastman Kodak Company, USA
SOURCE: U.S. Pat. Appl., 38 pp.
CODING AGENCY: USAN: 9939-9420
PUBLISHER: Patent
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION: Patent

AB Full-text, organic element for electroluminescent devices
PATENT INFORMATION: Patent

AB Full-text, organic element for electroluminescent devices
PATENT INFORMATION: Patent

AB Full-text, organic element for electroluminescent devices
PATENT INFORMATION: Patent

AB Full-text, organic element for electroluminescent devices
PATENT INFORMATION: Patent

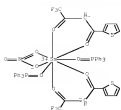
AB Full-text, organic element for electroluminescent devices
PATENT INFORMATION: Patent

AB Full-text, organic element for electroluminescent devices
PATENT INFORMATION: Patent

AB Full-text, organic element for electroluminescent devices
PATENT INFORMATION: Patent

AB Full-text, organic element for electroluminescent devices
PATENT INFORMATION: Patent

AB Full-text, organic element for electroluminescent devices
PATENT INFORMATION: Patent



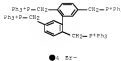
17 $\text{C}_{12}\text{H}_{10}\text{N}_2\text{O}_2$, Triphenylphosphine oxide
 RI: RCT (Reactant) RCT (Reactant or reagent)
 (Synthesis, characteristics and luminescent properties of (III) and (IV))
 (RI(III) skeleton for organic electroluminescent device applications)
 RI: 791-26-6 CASRN
 CN Phosphine oxide, triphenyl- (CA INDEX NAME)



05 CITING REF COUNT: 15 THERE ARE 15 CAPUS RECORDS THAT CITE THIS RECORD (15 CITINGS)
 REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 AMNER 33 OF 109 CAPUS COPYRIGHT 2010 ACT ON STM
 ACCESSION NUMBER: 20014161076 CAPUS [Full-Text](#)
 DOCUMENT NUMBER: 1391171345
 TITLE: Heteroatom-substituted phosphine oxide material, optoelectronic element using it, and display device and illumination apparatus using it
 INVENTOR(S): Matsuo, Masahito; Matsuo, Masahito; Matsuo, Masahito
 PATENT APPLICANT(S): Matsuo Electric Industrial Co., Ltd., Japan
 SOURCE: J. Chem. Soc., Chem. Commun., 2001, 1391171345
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFO: PATENT NUMBER: 20014161076
 KIND: A
 DATE: 2001-09-15
 APPLICATION NO.: JP 2002-27071
 DATE: 20020204

AB Building a new structural oligo(phenylenevinylene)s by linking trimeric phenylenevinylene (TPV) through the phenyl group at a central phenylene ring was reported. The resultant TPV dimers exhibit weak internal, intermolecular, and intense blue photoluminescence in the solid state as well as high phase transition temps. up to 250 °C. Organic light-emitting devices (OLEDs) based on these materials display blue emission with low turn-on voltage (3 V), maximum luminance approaching 200 cd/m² and efficiency up to 1.6 of A/L.
 17 $\text{C}_{12}\text{H}_{10}\text{N}_2\text{O}_2$, Triphenylphosphine, reactions
 RI: RCT (Reactant) RCT (Reactant or reagent)
 (Synthesis, characteristics and luminescence properties of oligo(phenylenevinylene) dimers with biphenyl linkage center)
 RI: 62878-90-0 CASRN
 CN Phosphonium, 1,1',1'',1'''-[[1,1',1'',1'''-biphenyl]-2,2',3,3'-tetrakis[trimethylsilyl]methyl]tetrakis[1,1',1'',1'''-biphenyl]-, bromide (14) (CA INDEX NAME)



17 $\text{C}_{12}\text{H}_{10}\text{N}_2\text{O}_2$, Triphenylphosphine, reactions
 RI: RCT (Reactant) RCT (Reactant or reagent)
 (Synthesis, characteristics and luminescence properties of oligo(phenylenevinylene) dimers with biphenyl linkage center)
 RI: 62878-90-0 CASRN
 CN Phosphonium, 1,1',1'',1'''-[[1,1',1'',1'''-biphenyl]-2,2',3,3'-tetrakis[trimethylsilyl]methyl]tetrakis[1,1',1'',1'''-biphenyl]-, bromide (14) (CA INDEX NAME)

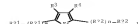


05 CITING REF COUNT: 20 THERE ARE 20 CAPUS RECORDS THAT CITE THIS RECORD (20 CITINGS)
 REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 AMNER 33 OF 109 CAPUS COPYRIGHT 2010 ACT ON STM
 ACCESSION NUMBER: 2001417245 CAPUS [Full-Text](#)
 DOCUMENT NUMBER: 1391289335
 TITLE: Highly Efficient Blue-emitting Organic Bipolar Pentad. Diodes from Polyfluorene Containing Bipolar Pendant Groups
 INVENTOR(S): Han, Yung-Peng; Han, Yung-Peng; Han, Yung-Peng
 PATENT APPLICANT(S): Nicholite S. Co., Asia
 SOURCE: J. Chem. Soc., Chem. Commun., 2001, 1391289335
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFO: PATENT NUMBER: 2001417245
 KIND: A
 DATE: 2001-09-15
 APPLICATION NO.: JP 2002-27071
 DATE: 20020204

CORPORATE SOURCE: Department of Applied Chemistry, National Chiao Tung University, Hsinchu, Taiwan, 30001, Taiwan

PRIORITY APPL. INFO.: JP 2002-27071
 OTHER SOURCE(S): MARPAT 1391171345
 SI 20020204



AB The $\text{C}_{12}\text{H}_{10}\text{N}_2\text{O}_2$ triphenylphosphine material is a heteroatom-substituted phosphine oxide material, optoelectronic element using it, and display device and illumination apparatus using it
 RI: RCT (Reactant) RCT (Reactant or reagent)
 (Synthesis, characteristics and luminescence properties of oligo(phenylenevinylene) dimers with biphenyl linkage center)
 RI: 62878-90-0 CASRN
 CN Phosphonium, 1,1',1'',1'''-[[1,1',1'',1'''-biphenyl]-2,2',3,3'-tetrakis[trimethylsilyl]methyl]tetrakis[1,1',1'',1'''-biphenyl]-, bromide (14) (CA INDEX NAME)



L6 AMNER 32 OF 109 CAPUS COPYRIGHT 2010 ACT ON STM
 ACCESSION NUMBER: 2001423244 CAPUS [Full-Text](#)
 DOCUMENT NUMBER: 14013916
 TITLE: Synthesis, characterization and luminescence properties of oligo(phenylenevinylene) dimers with a biphenyl linkage center
 AUTHOR(S): Ma, Feng; Cheng, Gang; Zhang, Baohui; Zhang, Yan; Li, Song; Song, Gang; Ma, Yuhang; Liu, Shiyong
 CORPORATE SOURCE: Key Laboratory for Supramolecular Structure and Materials of Ministry of Education, Jilin University, Changchun, 130023, P.R. China
 SOURCE: J. Chem. Soc., Chem. Commun., 2001, 14013916
 DOCUMENT TYPE: Patent
 LANGUAGE: English

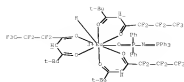
SOURCE: Macromolecules (2001), 34(18), 6698-7003
 CODEN: MAMOLJ 1281: 5014-5227
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB A highly efficient blue-light-emitting copolymer with bulky hole-transporting triphenylamine (TPA) and electron-accepting carbonyl-substituted fluorene groups as the C-9 position of fluorene was synthesized. The results from luminescence and electrochemical measurements reveal that both the side chains and the polyfluorene main chain contain their own electronic characteristics in the copolymer. It shows a pure blue emission with no aggregates or excimers formed even after being annealed at 350 °C for 10 h. 25 demonstrates improved charge injection and balanced charge transport in a heterostructure device. The maximum external quantum efficiency of a single-layer device using this copolymer as the emitting layer is 1.2% (at a brightness of 354 cd/m² with driving voltage of 14 V). The maximum luminance of the device reaches 4080 cd/m² at a bias of 12.0 V and a c.d. of 640 cd/m².
 17 $\text{C}_{12}\text{H}_{10}\text{N}_2\text{O}_2$, Tetraphenylphosphine, reactions
 RI: RCT (Reactant) RCT (Reactant or reagent)
 (Synthesis, characteristics and luminescence properties of oligo(phenylenevinylene) dimers with biphenyl linkage center)
 RI: 62878-90-0 CASRN
 CN Palladium, tetraphenylphosphine-, (7-41- (CA INDEX NAME)



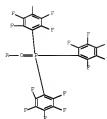
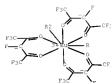
05 CITING REF COUNT: 162 THERE ARE 162 CAPUS RECORDS THAT CITE THIS RECORD (162 CITINGS)
 REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 AMNER 34 OF 109 CAPUS COPYRIGHT 2010 ACT ON STM
 ACCESSION NUMBER: 2001550870 CAPUS [Full-Text](#)
 DOCUMENT NUMBER: 1391350404
 TITLE: Photocrosslinkable phosphine oxide-sulfone, pyridine sulfonate, and phosphine oxide-pyridine S-oxide, and thin film
 INVENTOR(S): Guoshun, Vladimir; Heron, Norman; Petrov, Vladimir
 PATENT APPLICANT(S): Nicholite S. Co., Asia
 SOURCE: J. Chem. Soc., Chem. Commun., 2001, 1391350404
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFO: PATENT NUMBER: 2001550870
 KIND: A
 DATE: 2001-09-15
 APPLICATION NO.: JP 2002-27071
 DATE: 20020204

CORPORATE SOURCE: Department of Applied Chemistry, National Chiao Tung University, Hsinchu, Taiwan, 30001, Taiwan



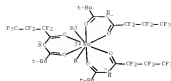
FO 569642-11-1 CAPLOS
CN Europium, tria[1,1,1,3,5,5,5-heptafluoro-2,6-pentadecanato-
k₀,k₀⁺]bis[tris(pentafluorophenyl)phosphine oxide-k₀]-
(9C1) (CA INDEX NAME)



TT 569642-12-2 CAPLOS
RI, DEV (Device component use); SPN (Synthetic
Preparation); PSEP (Preparation); ISEP (Use)
(Preparation and use as photoactive lanthanide complex for use in
electronic devices)
FO 569642-13-1 CAPLOS
CN Europium, tria[1,1,1,3,5,5,5-heptafluoro-2,4-pentadecanato-

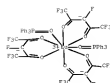


RI 569642-12-2 CAPLOS
CN Europium, tria[1,1,1,3,5,5,5-heptafluoro-2,8-dimethyl-3,5-octadecanato-
k₀,k₀⁺]bis[tris(pentafluorophenyl)phosphine oxide-k₀]-
(9C1) (CA INDEX NAME)

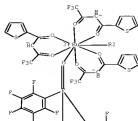


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k₀,k₀⁺]bis[tris(pentafluorophenyl)phosphine oxide-k₀]- (9C1) (CA
INDEX NAME)



IT 569642-14-1
RI, DEV (Device component use); SPN (Synthetic preparation); PSEP
(Preparation); ISEP (Use)
(Preparation as photoactive lanthanide complex for use in electronic
devices)
RI 569642-14-6 CAPLOS
CN Europium, tria[4,4,6-trifluoro-1-(2-thienyl)-1,3-butanedionato-
k₀,k₀⁺]bis[tris(pentafluorophenyl)phosphine oxide-k₀]-
(9C1) (CA INDEX NAME)





L6 ANSWER 38 OF 109 CAPLOS COPYRIGHT 2010 ACS on STM

AUTHOR(S): Chen, Shi-Kuan; Lee, Nancy Hsi Sim; Huang, Wei; Xu, Yi-Sha; Cao, Yong

CORPORATE SOURCE: Institute of Materials Research and Engineering (IMRE), Singapore, 117602, Singapore

AB Three PPV (poly(phenylene-vinylene)) derive with di-hexyloxyphenyl substituents, BSH2P-PPV, BSH3P-PPV, and BSH4P-PPV were synthesized and characterized by FT-IR, IR NMR, and elemental anal. The polymers possess

excellent solubility in organic solvents, high mol. weight, high photoluminescence efficiency, and good thermal stability. The influence of substitution pattern on the formation of structural defects was studied by measuring the signal due to tolane-bisphenol moieties (TBM) in the proton NMR spectra. The measured chemical shift δ of the TBM group is plotted on the left side of Fig. 10 showing the lowest amount of TBM, which indicates that suitable steric hindrance can be applied to suppress the formation of irregular head-to-head and tail-to-tail linkages in the polymer chains. The polarity of solvents used in the dilch polymerization also affect the extent of irregular

structures in *p*-polymers, i.e., polar solvents such as THF caused formation of polymers with low TSC content. Energy level measurement from cyclic voltammetry revealed that the HOMO and LUMO levels of the polymers, HOMO and LUMO are different. The three polymers possess similar HOMO energy levels while the LUMO of REH46-PPV is much higher than that of the other two polymers. The color of the films of the polymers was blue for REH45-PPV, REH46-PPV, and REH48-PPV, with configuration of ITO/PEBOT/polymer/SrAl₂ emitting bright blue-green to green light with maximum peaks at 496, 498, and 525 nm, resp. The turn-on elec. field and maximum external quantum efficiency of the polymers were 0.38, 0.35, and 0.25 V/cm, and 0.02, 0.03, and 0.04%, resp. The quantum efficiency is mainly determined by electron injection from the cathode. With the highest luminance, lowest turn-on elec. field, and good quantum efficiency and single-blue electroluminescence, REH46-PPV is the most suitable material for blue LEDs.

IT 14221-wt-3, Tetrakis(triphenylphosphine)palladium
 RE: CAT (Catalyst use); USES (Uses)
 (Suzuki coupling catalyst; preparation of dihexyloxy-Ph-phenylenes and PPVs
 with high stability and luminescence and performance in FLEDs)
 HN 14221-01-3. CARBON

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Journal compilation © 2006 Blackwell Publishing Ltd

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RN  14221-01-3  CAPSUS
CN  Palladium, tetrakis(triphenylphosphine)-, (T-4)- (CA INDEX NAME)

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$$\text{Ph}_3\text{P}-\overset{\text{PPh}_2}{\underset{\text{O}}{\text{C}}}-\text{PPh}_2$$

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
(5 CITINGS)

L6 ANSWER 40 OF 109 CAPLUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 2002:963854 CAPLUS Full-text
DOCUMENT NUMBER: 330:46953
TITLE: Cyclic electrical transport elements

INVESTOR(S): Organic Chemicals Co., Ltd., Yokohama
Tominaga, Takeshi; Makiyama, Akira; Kobana, Toru
PATENT ASSIGNEE(S): Toxay Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp
CODEN: JXOXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
.....

JP 2002367985 A 20021220 JP 2001-173611 20010608
PRIORITY APPLN. INFO.: JP 2001-173611 20010608
AB The elements comprise: Ip(ETL) < Ip(SMT); Ea(ETL) < Ea(ENL) (Ea = electron
affinity (eV); Ip = ionization potential (eV); ETL = electron transport layer
containing an organic compound with a mol. weight > 400; ENL = phosphor
layer)

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IT 110980-94-8
    RL: DEV (Device component use); USES (Uses)
        (organic compounds, inorganic elements)
KN 110988-94-8 CARLOS
CN Phosphorus oxide, diphenvyl-1-methylene- (CA INDEX NAME)

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OR CITING REF COUNT: 2 THERE ARE 2 CAPTIONS RECORDED THAT CITE THIS RECORD (2 CITINGS)

vinylallyloxycarbonyl)pentyloxy)phenyl)thien-2-yl)-9,9-dipropylfluorene was

[illegible]

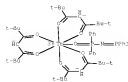
$$\begin{array}{c} \text{Ph}_3 \\ | \\ -\text{Cl}-\text{N}^+- \\ | \\ \text{Ph}_3 \end{array}$$
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INVENTOR(S)	Kiam-T Limited, UK																																																																																																																																																																																																																																										
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RL: DRV (Device component use); USES (Uses)
      (:active) - active devices with silicon anodes and metal
      chelate-containing active layers)
1568E2-92-7 CAPLSE
Terbium, [P,p]-diphenyl-N-(triphenylphosphoranylidene)phosphin-
amide-X(0)tris(2,2,6,6-tetramethyl-3,5-heptanedionato-
X(0,X(0))- (2CI) (CA INDEX NAME)

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REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS
RECORD; ALL CITATIONS AVAILABLE IN THE RE FORMAT

LE NUMBER: 45 OF 109	CARLOS COCHINTO 2010 ACS ON STN
ACCESSION NUMBER:	2021069317 CARLOS Full-text
DOCUMENT NUMBER:	137360259
TITLE:	Internet communication devices
INVENTOR(S):	Kathrin Grossmann, Poopathy
PATENT ASSIGNER(S):	Elms-7 Limited, UK
SOURCE:	PCT Int. Appl., 54 pp.
	CODES: P1XK02
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	2
TEXT INFORMATION:	

REFERENCE COUNT:

L6 ANSWER 46 OF 109 CARLOS CASTRIGNO 2010 ACS on STM
ACCESSION NUMBER: 2002:661440 CAPLAW Full-text
DOCUMENT NUMBER: 137:330597
TITLE: Electoral Influence Proprietors

AUTHOR(S) :

CORPORATE SOURCE

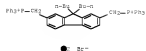
1. INTRODUCTION

1

[illegible]

AB The silicon electrode devices are described which comprise a first silicon electrode, a layer of an electrochromic compound comprising a metal chelate and a cathode, preferably there is a layer of an electrochromic compound between the anode and the silicon electrode compound and a layer of an electrochromic compound, the material between the silicon electrode compound and the silicon electrode. The metal chelate may be a mixed metal chelate. The cathode is preferably a low work function metal selected from aluminum, aluminum hydride, lithium, cesium, rubidium, potassium, sodium, calcium, barium, strontium, and magnesium.

17	<p> $\text{R}^1, \text{R}^2, \text{R}^3, \text{R}^4, \text{R}^5$ R1: RCT (Reactant); RACT (Reactant or reagent) (cyclic)oligomers of systematically derivatized organic phosphorus containing electron donor and acceptor groups synthesized using) R60 473700-70-8 CAPLOS C8 Phosphonium, (9,9-dibutyl-9H-fluorene-2,7- diylidene)bis(methylene)bis(triphenyl-, dibromide (PCI) (CA INDEX NAME) </p>
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OS CITING REF COUNT: 23 THERE ARE 23 CARLOS RECORDS THAT CITE THIS
RECORD (23 CITINGS)
REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMATS

L6 ANEXIMA 47 OF 109 CAPLUS COPYRIGHT 2010 ACS on STM
 ACCESSION NUMBER: 2502463226 CAPLUS Full-text
 TITLE: 137302819
 AUTHOR(S): Growth and characterization of GdCl₃ with
 europium complex as emission layer
 Reyes, R. / da Silva, C. F. S. / de Brito, H. F. /
 Cremone, M.
 CORPORATE SOURCE: Departamento de Fisica, Pontificia Universidade
 Catolica do Rio de Janeiro, PUC-Rio, Brasil

SOURCE: Brazilian Journal of Physics (2003), 32(2B), 333-339

PUBLISHER: CODEN: RJPMBE; ISSN: 0038-9733

DOCUMENT TYPE: Sociedade Brasileira de Física

LANGUAGE: Journal: English

AB The growth and the characterization of red emitting triple-layer $\text{In}_{0.15}\text{Ga}_{0.85}\text{P}/\text{In}_{0.53}\text{Ga}_{0.47}\text{P}/\text{In}_{0.53}\text{Ga}_{0.47}\text{P}$ organic devices using vacuum deposited (MOTTA) (377002) complex as emitting layer are described. The observed $\text{In}_{0.53}\text{Ga}_{0.47}\text{P}$ (SL) is characterized by the EPL emission. In this device the hole transport layer is obtained using a thin film of 1-(3-methylnaphthalen-1-yl)-2,2,3,4-tetrahydro-1,4-benzoxazine-3-carboxylic acid (MNA) (377003) and the tri(5-hydroxyphenyl)aminoaluminum (Alq3) is used as electron transport

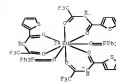
layer (ETL).
121215-29-8

RI: DEW (Device component use); PEP (Physical, engineering or chemical process); PFE (properties); PTE (Physical process); PROO (Process); USBS (USBS)

growth and characterization of organic LEDs with emission layer of)

121215-29-8 CAPLOS

European, tri[4,4,4-trifluoro-1-(2-thienyl)-1,3-butanediolate-methyl-poly[1,4-bis(2-methyl-5-phenyl-1,3,4-oxadiazol-2-yl)]-2,2,5,5-tetrafluoro-1,3,4-oxadiazole]



OR CITING SEE CO

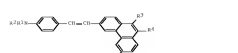
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THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE BE FORMAT

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66      NUMBER 48 OF 109 CAPLUS COPYRIGHT 2010 FILE ON STN
        ACCESSION NUMBER: 2001060834 CAPLUS FILE NO.
        DOCUMENT NUMBER: 137.014140
        TITLE:
            Alinicotrylphenanthrenes having high luminance for
            red-emitting organic light emitting diode
            materials, their intermediates, and their preparation
            [Johinure, Marui; Ishibashi, Tadashi]; Tamura, Shirochiro
            Sony Corp., Japan
            Jpn Kokai Tokkyo Koho, 37 pp.
            CODEN: J0000M
        DOCUMENT TYPE: Patent
        LANGUAGE: Japanese
        FAMILY ACC NUM COUNT: 1
        PARENT NUM COUNT: 0

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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002226722	A	20020814	JP 2001-21006	20020130 ←
JP 4158078	B2	20081001		
PRIORITY APPL. INFO :			JP 2001-21006	20020130
OTHER SOURCE(S) :	MANPAT 137:161463			



AB Aminoaryltriphenylphenathrenes shown as 1 (R1 = (substituted) aryl; R2 = unsubstituted aryl; R3-R5 = H, cyano, hydrocarbyl, etc.) are prepared by condensation of 6-(R1-methylphenyl)benzaldehydes with phosphonic acid esters and/or phosphonates which are prepared by reacting haloaromatic phenathrenes (prepared from phenathrenes and 8-haloaromatic aminobenzotriazoles) with trialkyl phosphites or PHOS. 2 are useful for organic electroluminescent material which emit red lights whose maximum emission wavelength can be varied based on substituents introduced to the structures. Moreover, 2 has high-m.p., good heat resistance, enhanced a.s.c., thermal, or chemical stabilities, are amorphous which easily give glass states, and are soluble and hence formation of amorphous films by vapor deposition is easy.

IT 450944-97-5 CAPLUS
R1: RCT (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
Preparation of aminoaryltriphenylphenathrenes having high luminance for red-emitting organic EL materials

RX 450944-97-5 CAPLUS
CA Phosphonium, (1,3-bis(dicyano-6-methyl-3-phenanthryl)methyl)triphenyl-, bromide (1:1) (CA INDEX NAME)

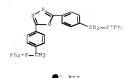


IT 450944-97-5 CAPLUS
R1: RCT (Reactant); RCT (Reactant or reagent)
Preparation of aminoaryltriphenylphenathrenes having high luminance for red-emitting organic EL materials
R1: RCT (Reactant); RCT (Reactant or reagent)
CA Phosphonium, triphenyl-, bromide (1:1) (CA INDEX NAME)



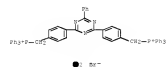
OS CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

16 NUMBER 49 OF 109 CAPLUS COPYRIGHT 2010 ACS on SW
ACCESSION NUMBER: 2003179086 CAPLUS FULL-TEXT
DOI NUMBER: 10.1021/10.1021
Synthesis and properties of new electroluminescent polymers possessing both hole- and electron-transporting units in the main chain

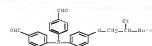


RX 450944-97-5 CAPLUS
CA Phosphonium, (1,3-bis(dicyano-6-methyl-3-phenanthryl)methyl)triphenyl-, dibromide, polymer with 4,4'-bis(1,1,2-ethoxyethoxy)phenylimino bis(benzaldehyde) (PC1) (CA INDEX NAME)

CM 1
CRN 450944-91-9
CMF C28 H43 N3 P2 2 Br



CM 2
CRN 437769-71-6
CMF C28 H31 N3 O3



IT 450944-97-5 CAPLUS
R1: RCT (Reactant); RCT (Reactant or reagent)

AUTHOR(S): Kim, Sang-Won; Shin, Sang-Chul; Jung, Byung-Joon; Shin, Hong-Ku
CORPORATE SOURCE: Center for Molecular Design and Synthesis, School of Molecular Science-BE21, Department of Chemistry, Korea Advanced Institute of Science and Technology, Yuseong-stn, Taejeon, 305-701, S. Korea
SOURCE: Polymer (Pb), 43(15), 4297-4305
CODEN: POLYDH; ISSN: 0032-3861
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB New EL polymers possessing both hole- and electron-transporting units in the main chain are synthesized. The polymer prepared by palladium catalyzed Heck reaction of 10 and 15 show a large weight average mol. weight (Mw) (25,000) and small polydispersity index (PDI) (1.2). The oligomers synthesized by Wittig condensation have Mw of 4000 and PDI of 1.8. All the polymer and oligomers synthesized exhibit reasonable thermal stability with high decomposition temperature and high Tg as determined by thermal gravimetric analysis (TGA) and differential scanning calorimetry (DSC) under nitrogen atmosphere. The EL emission maxima peaks of the materials prepared are in the range of 535-560 nm corresponding to green-yellowish-green. Among the three 1,3-bis(dicyano-6-methyl-3-phenanthryl)imino bis(benzaldehyde) (PC1) (CA INDEX NAME) and transporting property.

IT 450944-97-5 CAPLUS
R1: RCT (Reactant); RCT (Reactant or reagent); PREP (Preparation); RACT (Reactant or reagent)
Preparation of aminoaryltriphenylphenathrenes having high luminance for red-emitting organic EL materials

RX 450944-97-5 CAPLUS
CA Phosphonium, (1,3-bis(dicyano-6-methyl-3-phenanthryl)methyl)triphenyl-, dibromide, polymer with 4,4'-bis(1,1,2-ethoxyethoxy)phenylimino bis(benzaldehyde) (PC1) (CA INDEX NAME)

CM 1
CRN 437769-71-6
CMF C28 H31 N3 O3



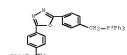
CM 2
CRN 221615-56-1
CMF C32 H42 N2 O P2 2 Br

(monomer synthesis), electroluminescent polymers possessing both hole- and electron-transporting units in the main chain
R1: RCT (Reactant); RCT (Reactant or reagent)
CA Phosphonium, (1,3-bis(dicyano-6-methyl-3-phenanthryl)methyl)triphenyl-, dibromide, polymer with 4,4'-bis(1,1,2-ethoxyethoxy)phenylimino bis(benzaldehyde) (PC1) (CA INDEX NAME)

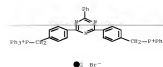


IT 450944-97-5 CAPLUS
R1: RCT (Reactant); RCT (Reactant or reagent); PREP (Preparation); RACT (Reactant or reagent)
Preparation of aminoaryltriphenylphenathrenes having high luminance for red-emitting organic EL materials

RX 450944-97-5 CAPLUS
CA Phosphonium, (1,3-bis(dicyano-6-methyl-3-phenanthryl)methyl)triphenyl-, dibromide, polymer with 4,4'-bis(1,1,2-ethoxyethoxy)phenylimino bis(benzaldehyde) (PC1) (CA INDEX NAME)



RX 450944-97-5 CAPLUS
CA Phosphonium, (1,3-bis(dicyano-6-methyl-3-phenanthryl)methyl)triphenyl-, dibromide, polymer with 4,4'-bis(1,1,2-ethoxyethoxy)phenylimino bis(benzaldehyde) (PC1) (CA INDEX NAME)



OS CITING REF COUNT: 29 THERE ARE 29 CAPLUS RECORDS THAT CITE THIS RECORD (29 CITINGS)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD (20 CITINGS)

05.CITING REF COUNT:	7	THERE ARE 7 CAPUS RECORDS THAT CITE THIS RECORD (7 CITINGS)
REFERENCE COUNT:	13	THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

LE 46 ANIMAA 50 OF 10 CAPLUS COPYRIGHT 2010 CAN ON STN
 ACCESSION NUMBER: 2012028940 CAPLUS Full-text
 DOCUMENT NUMBER: 13712223
 TITLE: Blue organic ~~light-emitting~~ devices
 based on a diaryliarylene derivative an emitting
 layer and a hole-transport layer
 AUTHOR(S): Wang, Liang Hua; He, Li; Bu-You, Gao; De-Qing;
 Huang; Yan-Yan; Huang, Chun-Hua
 CORPORATE SOURCE: Peking University, State Key Laboratory of Rare Earths
 Materials Chemistry, Beijing, 100871, China
 SOURCE: Journal of Luminescence 170(7), 911-911, 55-59
 CODEN: JLMUJN; ISSN: 0264-2267-2313
 PUBLISHER: Elsevier Science B V
 DOCUMENT TYPE:

[illegible]
$$\text{PA}_2\text{P} \begin{array}{c} \text{PPA}_3 \\ \text{O} \\ \text{PPA}_3 \end{array}$$

OS CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS
RECORD (23 CITINGS)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE BB FORMAT

L6 ANSWER 52 OF 109 CAPLUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 2002:33246 CAPLUS Full-text
DOCUMENT NUMBER: 136,279773

TITLE: Synthesis and electroluminescent studies of blue-emitting copolymers containing phenylene vinylene and oxadiazole moieties in the main chain

AUTHOR(S): Zheng, Min; Ding, Lining; Gürel, E. Elif; Karasz, Robert H.

CORPORATE SOURCE: Department of Polymer Science & Engineering, Conte Center for Polymer Research, University of Massachusetts, Amherst, MA, 01003, USA

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry

(2001), Volume Date 2002, 40(2), 235-241
 CODEN: JFACJG; ISSN: 0897-624X
 John Wiley & Sons, Inc.
 PUBLISHER: Journal
 DOCUMENT TYPE: Journal
 LANGUAGE: English

ABSTRACT: The statistical copolymers of 1,12 and TV combining features of the two reference polymers I and II were synthesized by a Wittig reaction with the objective of raising the π -conjugation properties and fluorescence quantum yields relative to the alternating block copolymers I and II. The electrochemical studies of the copolymers showed that the introduction of the π -conjugate quantum efficiencies of 0.035 and 0.114 were obtained from single-layer devices on the basis of 122 and TV, resp., which are higher than those of similar devices using I and II. Two single-layer LEDs using a blend of 2 and 122 and 122 and TV, respectively, were compared with the copolymers of 122 and TV, resp. were also fabricated for comparison. Results indicated that the covalent incorporation of oxadiazole is effective in improving the efficiency of the LEDs.

16004-87-7
RL: POF (Polymer in formulation); PDP (Properties); TM (Technical or engineered material use); USES (Uses)
(synthesis and electrochromic studies of blue-emitting copolymers containing phenylene vinylene and oxadiazole moieties in the main chain)

PN 146284-85-7 CAPLUS
CE Phosphonium, 1,1'-[3,4-phenylenebis(methylene)]bis[1,1,1-triphenyl-,
chloride (1:2), polymer with 4,4'-[1,8-octanediylbis(oxy)]bis[3,5-
dinitrobenzaldehyde] (CA INDEX NAME)

CN 1
CFR 146119-99-

FATEPAT NO.	FUND	DATE	APPLICATION NO.	DATE
MO 2000142446	A1	20000223	WO 2001-243300	20010810 <--
Wt, Fp, FR, HL				
JP 2002154993	A	20000528	JP 2001-243306	20030810 <--
FE 12231434	A	20000710	JP 2001-255540	20030810 <--
Tw, Fp, FR, HL				
WI 20030087126	B	20010720	TW 2001-901261	20030410 <--
US 6928910	S2	20000516	US 2000-0407	20020410 <--
US 2000014651	A1	20000407	US 2004-330614	20040901 <--
US 7165240		20010123		

PRIORITY APPLN. INFO.: JP 2000-242476 A 20000810

JF 2000-268568	A	20000905
JF 2000-26276	A	20000810
W0 2001-JF6920	W	20010810

US 2002-110241 A3 20020410
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN WWW DISPLAY FORMAT

AUTHOR SOURCE(S) : J. MOREAU 136:191499
 AB TITLE α,β -unsaturated elements comprise one pair of electrodes and pinpoints between the electrodes, 2 elements containing 21 α,β -unsaturated compounds in a general formula $X(R_1)(R_2)(R_3)(R_4)(R_5)(R_6)(R_7)(R_8)(R_9)(R_{10})(R_{11})(R_{12})$ where X is a substituted heterocyclic compound, R_1 through R_{12} are substituents which may be hydrogen, alkyl, aryl, branched or cyclic alkyl, alkoxy, amino, aryl, or α,β -unsaturated amino, aryl, or aralkyl, R_{10} and R_{11} are 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 having an anthracene ring and a fluorene ring which are directly bonded with each other. The compounds can be suitably used for preparing an electroluminescent element being excellent in electroluminescent efficiency and having a long useful life.

IT 74721-7-7, Tetakis(triphenylphosphine)palladium
 RL: DEV (Device component use); USES (Uses)
 (preparation of hydrocarbon compound for organic electrochromic)

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devices)
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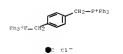
KN 14221-01-3  CACLOS
CH Gallium, tetakis(triphenylphosphine)-, (T=4)- (CA INDEX NAME)

```



CM 2

CRN 1519-47-7

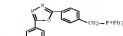


KN 147895-37-8 CAPLUS
 CM Phosphonium, [3,3,4-oxadiazole-2,5-diylbis(4,1-phenylenemethylene)]bis(triphenyl-, dibromide, polymer with 4,4'-(3,6-octanediyldis(oxy))bis(3,5-dimethoxybenzaldehyde) (9CI) (CA

INDEX NAME)

Q1 3

CMT C62 H42 H2 O R2 . 2 Br



● Be^{2+}

CM 2
CUN 146119-99-5
CMF C26 H34 O8

CTH	1519-47-7			
CMF	C44 H38 F2	2	Cl	

[illegible]

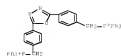
Abb: PAP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(synthesis and electrochromic studies of blue-emitting copolymers containing phenylene vinylene and oxadiazole moieties in the main chain)

```

NAME 405511-85-5 CAPLZE
CIN Phosphonium, [1,3,4-oxadiazole-2,5-diylbis(4,4'-
phenylene)methylene]bis[triphenyl-, dicationic, polymer with
4,4'-[1,1'-octanediyl]bis(oxy)]bis[3,5-dimethoxybenzaldehyde] and
[4,4'-phenylenebis(methylene)]bis[triphenylphosphonium] dichloride (9CI)
(CA INDEX NAME)

```

Q1 1
C101 221615-56-1
C102 C52 H42 N2 O F2 2 2 2



92 2

CFO# 146119-99-5
CNY# C26 H34 08



23

L6 ANSWER 54 OF 109 CAPLUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 2001:066148 CAPLUS Full-text
DOCUMENT NUMBER: 136:135116
TITLE: Synthesis and luminescent properties of

AUTHOR(S): Ahn, Taek; Shin, Hong-Hu
CORPORATE SOURCE: Center for Advanced Functional Polymers, Department of Chemistry and School of Molecular Science (BK21), Korea Advanced Institute of Science and Technology, Taejeon 305-701, S. Korea

SOURCE: Macromolecular Chemistry and Ph

PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English

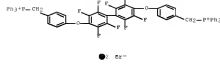
[illegible]

BL: BOF (Polymer in formulation); PFP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(blue light emitting polymers containing both hole and electron transport units)

Phosphonium, [12,2',3',3',5',5',6'-octafluoro[1,1'-biphenyl]-4,6'-diyl]bis(oxy-4,2-phenyleneethynylene)]bis(triphenyl-, dibromide, polymer with 9-(2-ethylhexyl)-9H-carbazole-3,6-dicarboxaldehyde [9CI] (CA INDEX NAME).

201

CRN 352354-13-3
CMT C62 H42 F8 O2 F2 . 2 D



CM 2

CHN 169051-20-1



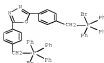
352354-16-6 CAPLUS
Phosphonium, [[2,2',3,3',5,5',6,6'-octafluoro[1,1'-biphenyl]-4,4'-diyl]bis[oxy-6,1-phenylene]methylene]bis[tri(phenyl)-, dibromide, polymer with 2-[(2-ethylhexyl)oxy]-5-methoxy-1,4-benzenedicarboxaldehyde [9CI]
(CA INDEX NAME)

CM

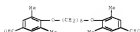
CRN 352354-13-3
CWP C62 H42 P8 D2 P2 7 2 R

IT	352374-14-90	352334-16-90	352333-30-90
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RN 372949-14-6 CAPLUS
 CD Benzaldehyde, 4,4'-(1,8-octadiynylbis(oxy))bis[3,3'-dimethyl-, polymer with 2,5-bis[4-(1,3-benzoxiphenylphosphoryl)methyl]phenyl-1,3,4-oxadiazole (PC1) (CA INDEX NAME)
 CN 1
 CSM 372949-13-3
 CMF C52 H42 Br2 O2 P2

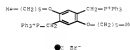


CN 2
 CSM 297155-61-4
 CMF C26 H14 O4



RN 372949-19-9 CAPLUS
 CD Benzaldehyde, 4,4'-(1,8-octadiynylbis(oxy))bis[3-ethoxy-, polymer with 2,5-bis[4-(1,3-benzoxiphenylphosphoryl)methyl]phenyl-1,3,4-oxadiazole (PC1) (CA INDEX NAME)
 CN 1
 CSM 372949-13-3
 CMF C52 H42 Br2 O2 P2

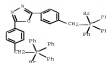
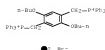
VIOLATION materials, poly(6-vinylbenzoxazole), PVH, and [2-(4-niphenyl)-5-(4-tert-butylphenyl)-1,3,4-oxadiazole] (butyl-PBD), resp.
 [3748-7-2] 2748-72-0
 RI: PPD (Proprietary)
 (electro- and photoluminescence of poly(phenylenevinylene) alternating copolymers)
 RN 229494-70-4 CAPLUS
 CD Phosphonium, [2,5-bis[hexyloxy]-3,4-phenylene]bis[hexyloxy-1,3,4-phenylene]bis[hexyloxy-1,3,4-phenylene], dibromide, polymer with 1,3-benzenedicarbonylbenzylidene (PC1) (CA INDEX NAME)
 CN 1
 CSM 165377-28-6
 CMF C56 H62 O2 P2 : 2 Br



CN 2
 CSM 626-19-1
 CMF C8 H6 O2



RN 229494-72-0 CAPLUS
 CD Phosphonium, [2,5-bis[hexyloxy]-1,4-phenylene]bis[hexyloxy-1,3,4-phenylene]bis[hexyloxy-1,3,4-phenylene], dibromide, polymer with 1,3-benzenedicarbonylbenzylidene (PC1) (CA INDEX NAME)
 CN 1
 CSM 229494-69-3
 CMF C54 H54 O2 P2 : 2 Br



CN 2
 CSM 297155-64-7
 CMF C26 H14 O4



US CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
 REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 NUMBER 57 of 109 CAPLUS COPYRIGHT 2010 ACS on STM
 ACCESSION NUMBER: 2001166194 CAPLUS Full-text
 DOCUMENT NUMBER: 1351358431
 TITLE: Efficient single layer organic light emitting diodes based on poly(6-phenylenevinylene)-alt-(p-phenylenevinylene) light emitting copolymers
 AUTHOR(S): Gurel, E. Elif; Pang, J.; Kuznetsov, Frank E.
 CORPORATE SOURCE: Department of Polymer Science and Engineering, University of Massachusetts, Amherst, MA, 01003, USA
 SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (PPCI), 42(1), 355-356
 CODEN: PCPWAY; ISSN: 0012-1934
 PUBLISHER: American Chemical Society, Division of Polymer Chemistry
 DOCUMENT TYPE: Journal (computer optical disk)
 LANGUAGE: English

AB In our previous work, we have reported the synthesis of new poly(6-phenylenevinylene)-alt-(p-phenylenevinylene) copolymers with bulky or hexyloxy side chains. These green light emitting copolymers showed high PL efficiencies which could be attributed to the presence of the hexyloxy unit. In this study, we have investigated the efficiency and photoluminescence of these copolymers with two different alkyl chains and compared the efficiency and stability of the devices in single and double layer configurations. The results indicate that we can enhance the efficiency substantially by using the multi-component blend approach, and by blending the green light emitting copolymers with hole and electron

US CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
 REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

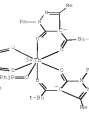
L6 NUMBER 58 of 109 CAPLUS COPYRIGHT 2010 ACS on STM
 ACCESSION NUMBER: 2001164838 CAPLUS Full-text
 DOCUMENT NUMBER: 1351378319
 TITLE: Efficient single layer organic light emitting diodes based on a tetra pyranolone complex
 AUTHOR(S): Moon, D. G.; Salata, O. V.; Strohle, M.; Dobson, P. J.; Christou, V.
 CORPORATE SOURCE: Department of Materials, University of Oxford, Oxford, Yerton, OX5 1EP, UK
 SOURCE: Synthetic Metals (SynM), 123(2), 355-357
 CODEN: SYNSYN; ISSN: 0378-4378
 PUBLISHER: Elsevier Science S.A.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Single layer devices of an organobenzene complex, the tria[1-phenyl-3-methyl-4-(tert-butylbutyl)pyrazol-5-yl]triphenylphosphine oxide [(C6H4)3P(Ph)(tBu)3], were made to study light emission and current transporting properties. Ca and Mg layers were used for the cathode contact. At higher voltages, the current density was higher than that of the single layer device with a Ca cathode was 226 mA/cm² at 18 V and the best efficiency was 0.67 cd/A at 14 V and 70 cd/m².

RI: DBY (Device component only) PPD (Proprietary) DBED (Device component only) Efficient single layer organic light emitting diodes
 RN 337244-44-4 CAPLUS
 CN Tachian, tria[4-(2,2-dimethyl-1-oxo-4-oxopropyl)-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-ylato-403] triphenylphosphine oxide-403- (CA INDEX NAME)

electrochem and optical properties of blue fluorescent
poly(alkoxyphenylene pyridine) conjugated polymers)
RN 14221-01-3 CREBUS
CN Palladium, tetrakis(triphenylphosphine)-, [T-4]- [CA INDEX NAME]

$$p_{1,3}p_{\infty} \begin{array}{c} p_{1,3} \\ | \\ p_{1,3}p_{\infty} \\ | \\ p_{1,3} \end{array} p_{1,3}$$

		
ON CITED REF COUNT:	22	THERE ARE 22 CITATIONS AVAILABLE THAT CITE THIS RECORD.
ACCESSION NUMBER:	13	THIS RECORD IS THE ONLY ONE AVAILABLE FOR THIS RECORD.
PREFERENCE COUNT:	13	THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS APPEAR IN THE RE. FORMAT.
LA NUMBER 53 OF 109	CASDISC CESTRAT 2010 CAS ON ITN	
DOCUMENT TYPE:	131346464	
TITLE:	Boreal Efficient Blue Fluorescent Polymers Comprising Alkoxycarbonyl Ethylene Pyridone And Special Ions: Their Synthesis, Characterization, and Optical Properties	
AUTHOR(S):	Jin, Chang-Hyun; Ju, Hyeon-Young; Kim, Hardy S. O.; Fujii, Akihiko; Lopez, Tommy Tomlin; Matsui, Masahito; School of Chemistry, Seoul National University of Science & Technology, Seoul 151-747, Korea	
CORRESPONDENCE SOURCE:	Sungil, 139260, Singapore	
SOURCE:	Macromolecules (2011), 44(20), 6895-6903	
FULLTEXT:	CASREF MORGRI, ISSN 0024-9297	
DOCUMENT TITLE:	American Chemical Society	
LANGUAGE:	Korean	
AB:	English	
	<p>A series of poly(2,2',6,6'-tetrakis(<i>p</i>-phenylene-<i>alt</i>-5,<i>y</i>-pyridine)s) functionalized with alternating donor/acceptor repeat units was synthesized via Suzuki coupling and characterized by FTIR, NMR, ILC and IR, UV-vis, fluorescence spectroscopy, gel permeation chromatography, and thermal analysis. The functionalized polypyridine-pyridones were soluble in common organic solvents and photochemically active and exhibited good thermal stability. In all cases the electronic and optical properties of the polymers were consistent with a rigid-rod conjugated structure. The polymers emitted intense blue light under UV irradiation at both the film and solution phases with high quantum yields. Single-layer blue light-emitting diode test structures were fabricated using the polymers as emitting layer. The efficient electrophoretic redoping mechanism and electron/hole transport properties of the polymers were studied and are attributed to the presence of the electron-withdrawing pyridyl units. The polymers displayed bathochromic shift when protonated with trifluoroacetic acid. Trifluoroacetic acid complexed polymers showed a significant redshift from chloroform and chloroform/trifluoroacetic acid mixtures, was studied from scanning electron micrographs.</p>	
27	<p>(1,2,3,4)-Tetrahydro-2-methyl-1H-phosphaphthalazine LAT CAT [Catalogue year] 0988 (EN)</p>	
	<p>Abstract: condensation polymer synthesis; preparation via Suzuki coupling</p>	

REF CITEZ REF COUNT:	20	THERE ARE 20 CASPUS RECORDS THAT CITE THIS RECORD. (20 CITINGS)
REF CITEZ REF COUNT:	20	THERE ARE 20 CASPUS RECORDS AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REF REPORT
LE ANNNER 61 OF 109		CASPUS CONFIRMED 2010 CAS ON RIN
ACCESSION NUMBER:	13110502	20101001 CASPUS CONFIRMED 2010 CAS ON RIN
DOCUMENT NUMBER:	13110502	
TITLE:	Synthesis and electrochromic of poly(2,2,5-trimethyl-5-vinylbenzofuran) based on fluorene containing	
AUTHOR(S):	Shen, Xiaomei; Liu, Tongqi; Yu, Guo; Xiao, Xian; Zhu, Dazhong; Sun, Rongrong; Wang, Delian; Wang, J.	
CORPORATE SOURCE:	Institute of Chemistry, Chinese Academy of Sciences, Beijing, 100080, P. R. China	
SOURCE:	Journal of Materials Chemistry (2010), 11(6), 1160	
	DOI: 10.1039/C9JM00091G	
PUBLISHER:	JOHN WILEY & SONS, 9600 Garsington Road, Oxford, OX4 2DQ, UK	
DOCUMENT TYPE:	Journal Article	
LANGUAGE:	English	

[illegible]

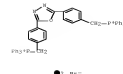
hydrazonepinene) / pyrene / isoprene / 1,3-butadiene / at a 8:5 or 30:30 or 2:1
17 1,1'-[2,2']-Tetrakis(triphenylphosphine) palladium
RI: CAT (Catalyst) / UHM (UHMWPE)
(coupling polymerization catalyst; preparation and ~~transport units~~ ~~of~~ ~~poly(arylene~~
~~ethers)~~ ~~and~~ ~~redox potential~~ ~~of~~ ~~1,3,5-trisubstituted poly(arylene~~
~~ethers)~~ ~~and~~ ~~redox potential~~ ~~of~~ ~~1,3,5-trisubstituted poly(arylene~~
~~ethers)~~ ~~and~~ ~~redox potential~~ ~~of~~ ~~1,3,5-trisubstituted poly(arylene~~
transport units)
Feb 14221-01-3 CAPLUS
C30 Palladium, tetrakis(triphenylphosphine)-, (T-4)- (CA INDEX NAME)

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 62 OF 109 CAPLUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 20011320433 CAPLUS Full-text

[illegible]

II	Quantum efficiency of 0.0044. λ_{max} 410 nm
IR	IR: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (intermediate; preparation and optical properties of oxadiazole contain conjugated-nonconjugated blue and blue-green light emitting copolymers)
HN	221615-56-1 CHUSU
CN	Phosphonium, 1,1'-(1,3,4-oxadiazole-2,5-diylbis(4,4'-phenylene)methylene)bis[1,1'-(1,3-trisubphenyl) bromide (1:1) (CA INDEX NAME)

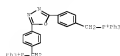


08 CITING REF COUNT: 33 THERE ARE 33 CAPTION RECORDS THAT CITE THIS
RECORD (33 CITINGS)

17 41792-6-10m 2,2'-bis[4-(4'-octadecyloxyphenyl)-5,6-dithienyl]diphenyl ether
 RI: PEP (Preparation); SPN (Synthetic preparation); PREP (Preparation)
 preparation and optical properties of oxadiazole containing
 conjugated-nonconjugated blue and blue-green dyes
 (11) (J) copolymer

20 34795-37-0 CAPSUS
 RI: Phosphonium [1,3,4-oxadiazole-2,5-diylbis(4,1-phenylene)methylene]bis(triphenyl)-, dibromide, polymer with
 4,4'-[1,8-octanediyldiis(oxy)]bis[3,5-dimethoxybenzaldehyde] (PCI) (CA INDEX NAME)

CM 1
 CRN 221615-56-1
 CME C32 H42 N2 O P2 2 Br



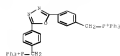
● Br⁻

CM 2
 CRN 146119-99-5
 CME C26 H34 O6



20 34795-37-0 CAPSUS
 RI: Phosphonium [1,3,4-oxadiazole-2,5-diylbis(4,1-phenylene)methylene]bis(triphenyl)-, dibromide, polymer with
 4,4'-[1,8-octanediyldiis(oxy)]bis[3,5-dimethoxybenzaldehyde] (PCI) (CA INDEX NAME)

CM 1
 CRN 297155-61-4
 CME C26 H34 O6



● Br⁻

06 CITING REF COUNT: 51 THERE ARE 51 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)
 14 CITING REF COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 NUMBER 63 OF 109 CAPLUS COPYRIGHT 2010 ACS on STM
 ACCESSION NUMBER: 201131595 CAPLUS Full-Text
 DOCUMENT NUMBER: 134130286
 TITLE: Efficient and Bright Blue Electroluminescence of Poly[4,1'-biphenylene-2,9''-diis(oxy)-3-fluorenylvinylene]

AUTHOR(S): Xu, Xinyong; Kim, Hyunil; Shin, Dong-Chul; Park, Hoon Young; Yu, Han-Seung; Jeon, Seon-Ri
 CORPORATE SOURCE: Department of Polymer Science & Engineering and Research Institute of Industrial Technology, Gyeongsang National University, Jinju, 660-701, S. Korea

SOURCE: Macromolecules (2010), 43(12), 3993-3997
 CODEN: MACKD4 ISSN: 0024-9297
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English

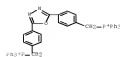
AB A blue electroluminescent (EL) polymer, poly[biphenylenevinylene] derivative containing a bulky fluorenyl group, was prepared by nickel-catalyzed coupling of 1,2-bis[4-(4-benzyloxyphenyl)-1-(9'',9''-diis(oxy)-3-fluorenyl)ethene] (BPEE). The structure and properties of the polymer, PBPBV, were studied. The polymer had good solubility and thermal stability. The PBPBV films showed maximum absorption and emission peaks at 370 and 495 nm, resp. A blue electroluminescence (EL) was observed with intensity of 4116 cd/m² at 10 V. The maximum EL efficiency was 0.22 lm/w with a turn-on voltage of 4.3 V. For optimum ratio of PBPBV to PVR blend as 1/5, the luminance and efficiency of the diode reached up to 9302 cd/m² and 1.66 lm/w, resp.

17 34795-37-0 CAPSUS
 RI: Phosphonium [1,3,4-oxadiazole-2,5-diylbis(4,1-phenylene)methylene]bis(triphenyl)-, dibromide
 RI: RCT (Reactant); RACT (Reactant or reagent)
 preparation and bright blue electroluminescence of poly[biphenylene-(diis(oxy)-3-fluorenyl)vinylene] and luminance efficiency of diode assembly

20 34795-37-0 CAPSUS
 RI: Phosphonium [1,3,4-oxadiazole-2,5-diylbis(4,1-phenylene)methylene]bis(triphenyl)-, dibromide (11) (CA INDEX NAME)



CM 2
 CRN 221615-56-1
 CME C32 H42 N2 O P2 2 Br



● Br⁻

20 34795-37-0 CAPSUS
 RI: Phosphonium [1,3,4-oxadiazole-2,5-diylbis(4,1-phenylene)methylene]bis(triphenyl)-, dibromide, polymer with
 4,4'-[1,8-octanediyldiis(oxy)]bis[3-ethoxybenzaldehyde] (PCI) (CA INDEX NAME)

CM 1
 CRN 297155-64-7
 CME C26 H34 O6



CM 2
 CRN 221615-56-1
 CME C32 H42 N2 O P2 2 Br



● Br⁻

06 CITING REF COUNT: 47 THERE ARE 47 CAPLUS RECORDS THAT CITE THIS RECORD (14 CITINGS)
 REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 NUMBER 64 OF 109 CAPLUS COPYRIGHT 2010 ACS on STM
 ACCESSION NUMBER: 201131603 CAPLUS Full-Text
 DOCUMENT NUMBER: 134130286
 TITLE: Efficient and Bright Blue Electroluminescence of Poly[4,1'-biphenylene-2,9''-diis(oxy)-3-fluorenylvinylene]
 INVENTOR(S): Tanaka, Hiromitsu; Mouri, Makoto; Takeuchi, Hisateru
 PATENT ASSIGNEE(S): Toyota Central Research and Development Laboratories, Inc., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 32 pp
 COCKER: JCOKAP
 LANGUAGE: Japanese
 FAMILY ACC NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	APPLICATION NO	DATE
JP 2001110732	A	20010420	JP 2000-237442	20000804
JP 4126591	B2	20080723		
US 4771111	B1	20040817	US 2000-632348	20000803
PRIORITY APPLN. INFO			JP 1999-221653	A 19990804
OTHER SOURCE(S):			USPAT 134130286	



AB The invention refers to an electroluminescent device comprising two electrodes and an emission layer containing 1 (A1,2 = functional group; R1,2 = direct bonds or divalent functional groups; A1,2 = triphenylamine, carbazole or oxadiazole derivative groups having hole and electron transport and luminescent properties).

17 34795-37-0 CAPSUS
 RI: RCT (Reactant); RACT (Reactant or reagent)
 preparation and bright blue electroluminescence of poly[biphenylene-(diis(oxy)-3-fluorenyl)vinylene] and luminance efficiency of diode assembly



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE SE FORMAT

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 200102576		AT 20010223	WO 2000-0822428	20000906 <
NI, AE, AU, BR, CA, CH, CN, DE, DK, ES, FI, FR, GB, GR, HU, IL, JP, KR, LU, NL, NO, NZ, PL, PT, RU, SE, SG, SI, SK, TR, TW, UA, US, YU, ZA	AI, AU, BR, CA, CH, CN, DE, DK, ES, FI, FR, GB, GR, HU, IL, JP, KR, LU, NL, NO, NZ, PL, PT, RU, SE, SG, SI, SK, TR, TW, UA, US, YU, ZA	AI, AU, BR, CA, CH, CN, DE, DK, ES, FI, FR, GB, GR, HU, IL, JP, KR, LU, NL, NO, NZ, PL, PT, RU, SE, SG, SI, SK, TR, TW, UA, US, YU, ZA	BR, CA, CH, CN, DE, DK, ES, FI, FR, GB, GR, HU, IL, JP, KR, LU, NL, NO, NZ, PL, PT, RU, SE, SG, SI, SK, TR, TW, UA, US, YU, ZA	CA, CH, CN, DE, DK, ES, FI, FR, GB, GR, HU, IL, JP, KR, LU, NL, NO, NZ, PL, PT, RU, SE, SG, SI, SK, TR, TW, UA, US, YU, ZA
BR, CH, CN, DE, DK, ES, FI, FR, GB, GR, HU, IL, JP, KR, LU, NL, NO, NZ, PL, PT, RU, SE, SG, SI, SK, TR, TW, UA, US, YU, ZA	BR, CH, CN, DE, DK, ES, FI, FR, GB, GR, HU, IL, JP, KR, LU, NL, NO, NZ, PL, PT, RU, SE, SG, SI, SK, TR, TW, UA, US, YU, ZA	BR, CH, CN, DE, DK, ES, FI, FR, GB, GR, HU, IL, JP, KR, LU, NL, NO, NZ, PL, PT, RU, SE, SG, SI, SK, TR, TW, UA, US, YU, ZA	BR, CH, CN, DE, DK, ES, FI, FR, GB, GR, HU, IL, JP, KR, LU, NL, NO, NZ, PL, PT, RU, SE, SG, SI, SK, TR, TW, UA, US, YU, ZA	BR, CH, CN, DE, DK, ES, FI, FR, GB, GR, HU, IL, JP, KR, LU, NL, NO, NZ, PL, PT, RU, SE, SG, SI, SK, TR, TW, UA, US, YU, ZA
US 2001014744		AT 20020307	US 2001-016527	20010323 <

L6 ANSWER 69 OF 109 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2001:64321 CAPLUS Fall-bug
DOCUMENT NUMBER: 134139011

TITLE: Cavity-emission ~~eic~~~~cr~~~~emission~~~~er~~ device
and method for forming the device
INVENTOR(S): Pei, Qibing; Oh, Seajin
PATENT ASSIGNER(S): Sci International, USA
SOURCE: PCT Int. Appl., 48 pp.
CODES: FIXED
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM COUNT: 2
ABSTRACT INFORMATION:

FAISST NO.	KIND	DATE	AFFILIATION NO.	DATE
00001005537		AL 00011205	MO 0000-0819374	20000130
W, AT, BE, CH, CT, DE, ES, ET, FI, FR, GB, GR, IE, IT, LU, NL, NO, PT, SE				
US 5503632	BL	2000030715	US 0000-010804	20000119
IE 1218949	AL	2000070305	IE 0000-950551	20000120
IE 1218949	AL	20001203		
FR 2618178	DE, ES, FI, FR, GB, GR, IT, LI, LU, NL, NO, PT, SE			
JP 200322371	T	20000722	JP 0001-510926	20000130
PRIORITY APPS, INVO. 1			US 1999-144908	F 19990320
			US 2000-618864	A 20001219
			US 0000-0819374	



A6	Cyclooctatetraene derivs. are described by the general formula I (R1-8 = alkyl, aryl, and/or alkynyl groups, and at least one of R1-8 is different from the others); groups of R1-8 Application as electron acceptors; materials in organic electroluminescence devices is indicated
I7	2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144,145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,161,162,163,164,165,166,167,168,169,170,171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,244,245,246,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265,266,267,268,269,270,271,272,273,274,275,276,277,278,279,280,281,282,283,284,285,286,287,288,289,290,291,292,293,294,295,296,297,298,299,300,301,302,303,304,305,306,307,308,309,310,311,312,313,314,315,316,317,318,319,320,321,322,323,324,325,326,327,328,329,330,331,332,333,334,335,336,337,338,339,340,341,342,343,344,345,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366,367,368,369,370,371,372,373,374,375,376,377,378,379,380,381,382,383,384,385,386,387,388,389,390,391,392,393,394,395,396,397,398,399,400,401,402,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,440,441,442,443,444,445,446,447,448,449,450,451,452,453,454,455,456,457,458,459,460,461,462,463,464,465,466,467,468,469,470,471,472,473,474,475,476,477,478,479,480,481,482,483,484,485,486,487,488,489,490,491,492,493,494,495,496,497,498,499,500,501,502,503,504,505,506,507,508,509,510,511,512,513,514,515,516,517,518,519,520,521,522,523,524,525,526,527,528,529,530,531,532,533,534,535,536,537,538,539,540,541,542,543,544,545,546,547,548,549,550,551,552,553,554,555,556,557,558,559,560,561,562,563,564,565,566,567,568,569,570,571,572,573,574,575,576,577,578,579,580,581,582,583,584,585,586,587,588,589,590,591,592,593,594,595,596,597,598,599,600,601,602,603,604,605,606,607,608,609,610,611,612,613,614,615,616,617,618,619,620,621,622,623,624,625,626,627,628,629,630,631,632,633,634,635,636,637,638,639,640,641,642,643,644,645,646,647,648,649,650,651,652,653,654,655,656,657,658,659,660,661,662,663,664,665,666,667,668,669,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689,690,691,692,693,694,695,696,697,698,699,700,701,702,703,704,705,706,707,708,709,710,711,712,713,714,715,716,717,718,719,720,721,722,723,724,725,726,727,728,729,730,731,732,733,734,735,736,737,738,739,740,741,742,743,744,745,746,747,748,749,750,751,752,753,754,755,756,757,758,759,760,761,762,763,764,765,766,767,768,769,770,771,772,773,774,775,776,777,778,779,780,781,782,783,784,785,786,787,788,789,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806,807,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,830,831,832,833,834,835,836,837,838,839,840,841,842,843,844,845,846,847,848,849,850,851,852,853,854,855,856,857,858,859,860,861,862,863,864,865,866,867,868,869,870,871,872,873,874,875,876,877,878,879,880,881,882,883,884,885,886,887,888,889,890,891,892,893,894,895,896,897,898,899,900,901,902,903,904,905,906,907,908,909,910,911,912,913,914,915,916,917,918,919,920,921,922,923,924,925,926,927,928,929,930,931,932,933,934,935,936,937,938,939,940,941,942,943,944,945,946,947,948,949,950,951,952,953,954,955,956,957,958,959,960,961,962,963,964,965,966,967,968,969,970,971,972,973,974,975,976,977,978,979,980,981,982,983,984,985,986,987,988,989,990,991,992,993,994,995,996,997,998,999,1000,1001,1002,1003,1004,1005,1006,1007,1008,1009,1010,1011,1012,1013,1014,1015,1016,1017,1018,1019

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LONG DISPLAY FORMAT

AN ELECTROSTATICALLY-actuated device and a method for producing the same are described. The device is formed from a layered structure comprising a base region of silicon, an electron-injector layer, an electrostatically-actuated material, an electron-injector electrode layer for injecting electrons into an electrostatically-actuated material and a dielectric layer. A cavity extends between the hole in the electrostatically-actuated material and the layers. A cavity extends through at least the dielectric layer and one of the layers. The electrostatically-actuated material has a hole extending through the layers and has an interior cavity surface comprising a hole-inletting electrode. A dielectric coating is formed on the interior cavity surface and the dielectric region. An electrostatically-actuated coating material is applied to the interior cavity surface. A dielectric coating is formed on the interior cavity surface.

II (42R)-11-3, Tetrakis(triphenylphosphine)-palladium
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (cavity-emission *excited*)*emission* device and method for
 forming device)

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PBI 14221-01-3 CAPLUS
CBI Palladium, tetrakis(triphenylphosphine)-, (T-4)- (CA INDEX NAME)

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OF CITING REF COUNT:	6	THERE ARE 6 CARLOS RECORDS THAT CITE THIS RECORD (7 CITINGS)
REFERENCE COUNT:	9	THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

08.CITING REF COUNT: 47 THERE ARE 47 CARLOS RECORDS THAT CITE THIS

LE ANSWER 70 OF 109 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2001437 CAPLUS Full-text
DOCUMENT NUMBER: 134272949
TITLE: Efficient red electrochromism from

RECORD (47 CITINGS)
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AUTHOR(S): devices having multilayers of a europium complex
 Hu, Weiping; Matsumura, Michio; Wang, Mingzhao; Jin,
 Linpei
 CORPORATE SOURCE: Research Center for Photoenergetics of Organic
 Materials, Osaka University, Osaka, 560-8531, Japan
 SOURCE: Applied Physics Letters (APL), 77(26),
 4271-4273
 CODEN: APPLAB; ISSN: 0003-6951
 PUBLISHER: American Institute of Physics
 DOCUMENT TYPE: Journal
 LANGUAGE: English

ACCESSION NUMBER: 2000:911592 CAPUS Full-text
DOCUMENT NUMBER: 134:78733

TITLE: Flat panel display with improved contrast
INVENTOR(S): Salata, Oleg Victorovich; Resnault, Olivier; Christow,
Victor
PATENT ASSIGNEE(S): Isia Innovation Limited, UK
SOURCE: PCT Int. Appl., 23 pp.
CODING: PEXX2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

AB To get red electroluminescence from a Zn complex with high efficiency, a hole-injection layer was inserted between the Zn-complex layer and an In-Sr-oxide electrode, and a hole-blocking layer was inserted between the Zn-complex and electron-transporting layers. To further improve the efficiency, devices having multiple-stacked Zn-complex (2.5 nm)/hole blocking (2.5 nm) units were fabricated. By stacking six units, the maximal luminance and emission efficiency of the red emission were increased to more than twice that from a device with a single Zn-complex layer.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NO 2000079616	A1	20001228	NO 2000-GR2377	20000619
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BT, BE, CA, CH, CN, CR, CU, DE, DK, DM, ES, FI, FR, GB, GR, HU, IE, JP, KR, LK,				

17 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
efficient reduction of requirements from devices having

NU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
LU, LV, MA, MD, MG, MK, MN, MR, MX, MY, NA, NZ, PL, PT, RO, RU,
SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
YU, ZA, ZW

	multilayers of a europium complex)
PM	1E377-1E-6 CAPIDS
CM	Europium, tris(1,3-diphenyl-1,3-propanedionato- mOL,MO3)(triphenylphosphine oxide-mO)-, (TP2-7-1-22'2'2'2'2)- (CA INDEX NAME)

RM: GH, GN, HE, LG, MW, NZ, SD, SL, SS, TS, UG, VN, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GR, GR, IE, IT, LU, NC, NL, PT, SE, SF, RJ,
CF, CG, CI, CM, GA, GN, GW, HE, HR, HU, IN, TD, TG

AB The invention relates to a non-reflective electrode which can be used in a

IT 1471001-4012

(flat panel display with improved contrast and containing front

RN	315181-49-8 CASLUS
CN	Terbium, aquatri[s(4-[2,2-dimethyl-1-(oxo- α)propyl]-2,4-dihydro-5-

TITLE: Synthesis of poly(arylene ether)s containing hole-transport moieties from an isocyanate masked biophenol

AUTHOR(S): Su, Jieping; Hill, Antwan R.; Ray, Allen S.; Mainford, Tony; Dadalet, Jean-Pol; Lam, Jennifer; D'Amico, Marie

CORPORATE SOURCE: Department of Chemistry, McGill University, Montreal, QC H3A 2B4, Can

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry 42(4), 3915-3919, 2004-2748

COPIES: JPMCC; ISSN: 0887-624X

PUBLISHER: John Wiley & Sons, Inc

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The design and synthesis of novel charge (hole- or electron-) transport materials have been the focus of much research in recent years because of their wide variety of applications. In this study, three high mol. weight poly(arylene ether)s, 6a-c, containing naphthyl-substituted benzidine moieties have been synthesized from carbonates derived from biophenols. After heating with H isocyanate, the moieties are stable, can be readily purified by recrystallization from toluene, and can be polymerized directly with diisocyanate compounds under mild conditions. The resulting polymers possess high glass-transition temps., excellent thermal stability, and good film-forming properties. In comparison, the poly(arylene ether)s 6a-c, synthesized from unprotected biophenols, have lower mol. wt.s and wider polydispersity and contain some bromine impurities. Twilminim experiments show that both 6a and 6b can function well as hole-transport materials in light-emitting diodes.

17 JPMCC/04 3915-3919 OF 050104-02
Hil PP (Properties); HIL (Synthetic preparation); TEM (Technical or engineering material use); PEP (Preparation); USES (Uses)

AB synthesis of poly(arylene ether)s containing hole-transport moieties from an isocyanate masked biophenol

26 2-Naphthylacetol, 6,6'-[1,1'-biphenyl]-4,4'-diylbis(phenylimino)bis-, polymer with bis(4-fluorophenyl)phosphine oxide (PCI) (CA INDEX NAME)

CM 1
CM 290015-93-9
CMF C44 H32 N2 O2



CM 2
CM 54300-32-2
CMF C18 H13 F2 O P



—HNF=O

CM 2
CM 54300-32-2
CMF C18 H13 F2 O P



OR CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ABSTRACT 80 OF 109 CAPLUS COPYRIGHT 2010 ACS ON STM

ACCESSION NUMBER: 2010-002176 CAPLUS Full-Text

DOCUMENT NUMBER: 131251589

TITLE: Synthesis of Octasubstituted Cyclooctatetraenes and Their Use as Electron Transporters in Organic Light-Emitting Diodes

AUTHOR(S): Gu, Jing; Hong, Huiyuan; Cai, Shuang; Duryovich, Peter; Weber, William F.; Thompson, Mark E.

CORPORATE SOURCE: Department of Chemistry and The Donald P. and Katherine B. Loker Hydrocarbon Research Institute, University of Southern California, Los Angeles, CA, 90089, USA

SOURCE: Journal of the American Chemical Society 132(1), 1680-1686

COPIES: JACS; ISSN: 0002-7863

PUBLISHER: American Chemical Society

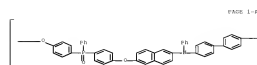
DOCUMENT TYPE: Journal

LANGUAGE: English

AB The synthesis and characterization of octasubstituted cyclooctatetraenes (COTs) as well as their use as electron-transport materials in organic LEDs are reported. Tetraaryltetracyanoethylenecyclooctatetraenes (COTs) were prepared from 1,2-dicyanobenzene and 1,2-dicyanobenzene by treatment with lithium and iodine in 50% yield. Cyclic voltammetry indicates that these COTs are reduced in sequential one-electron steps; COTs 4c (COTs) and COTs 4b are thermally stable to sublimation and have wide optical energy gaps (HOMO-LUMO) = 392-412 nm making them good candidates for use in organic LEDs. These octasubstituted COTs have been used



29 290015-98-4 CAPLUS
CM Poly[ox(1,4-phenylene)phosphine]bis(1,4-phenylene)bis(2,6-naphthalenediyl) (PCI) (CA INDEX NAME)



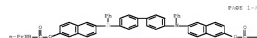
PAGE 1-A



PAGE 1-B

29 290016-05-6 CAPLUS
CM Carboxylic acid, propyl-, [1,1'-biphenyl]-4,4'-diylbis(phenylimino)-6,2-naphthalenediyl ester, polymer with bis(4-fluorophenyl)phosphine oxide (PCI) (CA INDEX NAME)

CM 3
CM 290015-94-0
CMF C52 H45 N4 O4



PAGE 1-A

an electron-transport layer in single heterostructure organic LEDs, i.e., ITOP/ITO/4,4'-bis(carboxyphenyl)-2,2'-biphenyl (ITO = indium-tin oxide, BP = 4,4'-bis(phenyl)-2,2'-biphenyl). External quantum efficiencies of 0.1-0.28 (photons/electron) were observed, with turn-on voltages of ca. 6 V. The emission from this device comes exclusively from the BP hole-transporting layer, with a peak of 435 nm. Doping the BP layer with LiCl pyrene leads to an increased quantum efficiency of 0.4 and an electron-transport spectrum indicative of emission solely from the pyrene dopant, confirming exclusive emission from the BP hole-transporting layer.

17 JPMCC/04 3915-3919 OF 050104-02
Hil PP (Properties); HIL (Synthetic preparation); TEM (Technical or engineering material use); PEP (Preparation); USES (Uses)

AB synthesis of octasubstituted cyclooctatetraenes and their use as electron transporters in organic light-emitting diodes

26 2-Naphthylacetol, 6,6'-[1,1'-biphenyl]-4,4'-diylbis(phenylimino)bis-, polymer with bis(4-fluorophenyl)phosphine oxide (PCI) (CA INDEX NAME)

CM 1
CM 290015-93-9
CMF C44 H32 N2 O2



CM 2
CM 54300-32-2
CMF C18 H13 F2 O P



CM 2
CM 54300-32-2
CMF C18 H13 F2 O P

CM 2
CM 54300-32-2
CMF C18 H13 F2 O P



CM 2
CM 54300-32-2
CMF C18 H13 F2 O P

CM 2
CM 54300-32-2
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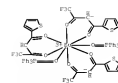
CM 2
CM 54300-32-2
CMF C18 H13 F2 O P

CM 2
CM 54300-32-2
CMF C18 H13 F2 O P

CM 2
CM 54300-32-2
CMF C18 H13 F2 O P



between which are provided a hole transport layer and an electron transport layer disposed in operative relationship with the hole transport layer are described in which the hole transport layer includes 21 aryl-linked polyphenyl



PATIENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1009043	A2	20000614	EP 1999-201963	19991225
EP 1009043	A3	20000703		
Re: AT, BR, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, NO, PT, RU, SI, ST, IT, FI				
JP 2000182777	A1	20000630	JP 1999-348488	19991208
KR 2000048007	A	20000725	KR 1999-55935	19991208
JP 20001021478	A1	20010913	US 2001-861391	20010426
US 6639595	B2	20040302		
US 20001023029	A1	20010928	US 2001-842445	20010426
US 6566415	A1	20010322		

AB Organic multilayer ~~electronic~~ devices including an anode and cathode between which are provided a hole transport layer and an ~~electron~~ transport layer disposed in operative relationship with the hole transport layer are described in which the hole transport layer includes 21 aryl-linked polyphenyl

NR 2000048008	A	20000725	NR 1999-55946	19991208	C
NR 792490	B1	20000114			
LOCKY APPLE; INFO;			08 1990-191705	A	19981131
			05 1990-207703	A	19981209

ALIGNMENT HISTORY FOR US PATENT AVAILABLE IN LGS DISPLAY FORMAT

Organic electroluminescent devices including an anode and cathode between which are provided a hole transport layer and an emissive "light-emitting" layer are disclosed in an operative relationship with a transport layer and an anode disposed in which the hole transport layer includes at least an aromatic



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88  14221-01-3  CAPLUS
89  Palladium, tetrakis(triphenylphosphine)-, (T-4)-  (CA INDEX NAME)

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06.CITING REF COUNT: 3  THERE ARE 3 CAPUS RECORDS THAT CITE THIS RECORD
                        (3 CITINGS)
REFERENCE COUNT: 1      THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS
                        RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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LS	ASSUMER	BA	OF	109	CARLOS CONTRERAST 2010 ACS on STN
ACCESSION NUMBER:					2000/601572
DOCUMENT NUMBER:					139/51003
TITLE:					Microarrayed device with improved hole
INVENTOR(S):					Shi, Jiaming; Tang, Ching
PATENT ASSIGNEE(S):					Eastman Kodak Company, USA
SOURCE:					Eur Pat. Appl., 37 pp. CODEN: EPXXXX
DOCUMENT TYPE:					Patent
LANGUAGE:					English
FAMILY ACC NUM. COUNT:					1
DATE: 2008-03-07 10:00:00					

00 CITING REF COUNT:	15	THERE ARE 15 CAPLOS RECORDS THAT CITE THIS RECORD (15 CITINGS)
REFERENCE COUNT:	2	THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

LE ANSWER 85 OF 139 CAPSUS COPYRIGHT 2010 ACS ON STM
 ACCESSION NUMBER: 20001304343 CAPSUS Pat-test
 DOCUMENT NUMBER: 133:24529
 TITLE: Research on the use of materials
 INVENTOR(S): Kathiramanathan, Peepathy
 PATENT ASSIGNEE(S): South Asia University Enterprises Ltd., UK
 SOURCE: PCT Int. Appl., 12 pp.
 CORDEN INDEXED
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 RELEV. INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1009041	A2	20000614	EP 1999-203960	19991125
KF 1009041	A3	20020306		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, SE, SI, LT, LV, FI, RO				
US 20010051285	A1	20011213	US 1998-27703	19981209
US 20020051285	A2	20020306		
JP 2000182715	A	20000220	JP 1999-348196	19991208

[illegible]

BR 991921	A	20011206	BR 1999-16921	19991201	<
EP 171544	A	20010215	EP 1999-87105	19991201	<
EP 171544	A	20010924			
FR 991787	CH, DE, ES, FR, GB, GR, IT, IL, LU, NL, SE, MC, PT,				
FR 991787	IT, SI, IL, SI, SI, PT, RO				
EP 200251630	T	20020924	EP 2000-88749	19991201	<
AD 158754	T	20010502	AD 1999-00000	19991201	<
AD 200657	T	20010315	AD 1999-87108	19991201	<
EP 171544	E	20020427	EP 1999-87108	19991201	<
EP 2202525	T3	20040401	EP 1999-87108	19991201	<
TW 99100000	T	20010222	TW 1999-00000	19991201	<
EP 2002M00415	A	20060505	EP 2001-00015	20010530	<
EU 616999	B1	20010120	EU 2001-85786	20010601	<
MC 2001000000	A	20010714	MC 2001-00000	20010801	<
HK 1404527	A1	20040305	HK 2002-10039	20020101	<
FR99171 APPL2: INFO: 1			FR 99-26407	20010102	<

[illegible][illegible]

(preparation and optical properties see also 79-0865)
 CH Tri(ethoxystyryl)-phenylenevinylenelester and -oxide
 oxadiazole/carbonate containing conjugated polymers)
 CH 221615-58-4 CMBDE
 CH Phenonium [1,3,5,8-tetraoxadiazole-2,2'-diylbis[4,1-
 phenyleneethylene]bis(triphenyl-, dibenzide, polymer with
 3-(2-ethylhexyl)-9H-carbazole-3,6-dicarbaldehyde (9CI) (CA INDEX NAME)
 CM 3
 CFM 221615-56-1
 CMF CS2 H42 M2 O P2 , 2 Re



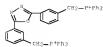
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REFERENCE COUNT:        3      THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS  
                               RECORD. AT 0308Z JAN 79, THE USMC IS REPORTING
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LE NUMBER DE 109 CAPLUS COPYRIGHT 2010 ACT on STN
 ACCESSION NUMBER: 2000/377755 CAPLUS Pull-down
 DOCUMENT NUMBER: 133/133692
 TITLE:
 Efficient and blue light-emitting
 polymers composed of conjugated main chain
 bis-, homaryl, benz, benzofury, benz, benz
 CORPORATE SOURCE: Department of
 Science and Technology, Taejeon, 305-701, S. Korea
 SOURCE: Synthetic Metals (SMP), 113-112, 609-612
 CODEN: SYMEDI; ISSN: 0924-6460
 DOCUMENT TYPE: Review Article
 DOCUMENT TYPE: Review Article

C10H 369051-20-1
 C10H C22 H25 N O2

$$n\text{-Bu}-\overset{\text{Et}}{\underset{|}{\text{C}}}-\text{CH}=\text{CH}_2$$

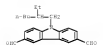




CM 2

CP22 169051-20-1

CNF C22 H25 N O2



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MS      225275-51-2  CAPLOS
C8      Phosphonium, [[2,5-bis(trimethylsilyl)-1,4-
        phenylene]bis(methylene)]bis(triphenyl-, dibromide, polymer with
        1,4-benzenedicarboxaldehyde (9CI) (CA INDEX NAME)

CN      1

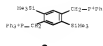
C88     161960-54-9
C89     C8D R54 R2 R32 . 2 Br

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CPM 161960-54-9
CME C50 H54 P2 S12 . 2 R

225273-35-6 CAPLUS
 Phosphonium, 1,1'-[2,5-bis(trimethylsilyl)-1,4-phenylene]bis[methylene]bis[1,1,1-triphenyl-, bromide (1:2), polymer with 1,2-benzenedicarboxaldehyde (CA INDEX NAME)

CPN 161960-34-9
CMT 050 H54 P2 812 - 2 B



ON	2
CPM	643-79-8
CMF	CB 86 02

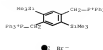


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(4 CITINGS)

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

LE ASSENER DT OF 109 CAPLUS COPYRIGHT 2010 ACS on STM
 ACCESSION NUMBER: 2000379093 CAPLUS [Publications](#)
 DOCUMENT NUMBER: 135124717
 TITLE: Polymer fluorescent material and polymers
 INVENTION(S):
 POLYMER FLUORESCENT MATERIAL AND POLYMERS
 INVENTOR(S):
 FUJIKAWA, TOSIYUKI; OSAKI, SHUJI
 SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
 PATENT: JNKKAW
 DOCUMENT TYPE:
 LANGUAGE: Japanese
 FAMILY ACCT. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000154334	A	20000626	JP 1998-329634	19981119
PRIORITY APPLIN INFO. 1			JP 1998-329634	19981119

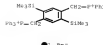


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CM      2
C10H    623-27-8
CMR     C8 H6 02
```



HN 220273-33-4 CAPLUS
 CN Phosphonium, [[2,5-bis(trimethylsilyl)-1,4-phenylene]bis(methylene)]bis(triphenyl-, dihydro-, polymer with 1,3-benzenedicarboxaldehyde (9CI) (CA INDEX NAME)

CM 1
CRN 161960-54-9
CME C50 H54 P2 S12 . 2 Bz



CM	2
CBH	626-19-7
CMT	C8 H16 O2



A8 The polymer, exhibiting visible fluorescence in solid state, with number average mol. weight (polystyrene conversion) 103-107 involves 250 mol% based on the amount of total repeating units) mixture of 2I ($\text{C}_6\text{H}_4(\text{CH}=\text{C}(\text{R})_2$) (2; R = alkyl-, alkoxy-, and/or aralkoxy-substituted arylene or heteroarylene with C=O covalent bonding); n = 0, 1; R₁, R₂ = H, Cl, 20-40 alkyl, C=O-20 aryl, C=O-20 heteroaryl, cyano) and 2II ($\text{C}_6\text{H}_3(\text{CN})(\text{C}(=\text{O})\text{R})_2$) (III; R = alkyl-, C=O-20 aryl, C=O-20 heteroaryl, cyano) with R₃ = O, CH₂, CH(CH₃), C(CF₃)₂, C(CN)₂; m = 0, 1, 2, 3, and satisfies $0.33 < X \times 0.77 [X = (\text{amount of C in substituents in I}) / (\text{amount of C in backbone in 2I} + 1)]$. The electroluminescent device involves a cathode and an anode, 2I of which is transparent or translucent, and the polymer as described herein sandwiched between them. The resulting polymer light-emitting polymer semiconductor device shows improved emission efficiency.

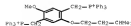
polymer structure, the device shows improved emission efficiency. The device is a polymer light-emitting diode (PLED) with a structure of ITO/polymer/Alq3/Mg:Ag. The polymer is a heat-resistant fluorescent polymer for use in a display device. The device is a polymer light-emitting diode (PLED) with a structure of ITO/polymer/Alq3/Mg:Ag. The polymer is a heat-resistant fluorescent polymer for use in a display device.

```

      device)
NN  273199-73-8  CAPLUS
CN  Phosphonium, [[2-methoxy-5-(3-methylbutoxy)-1,4-
    phenylene]bis[methylene]]bis[[triphenyl-, dibromide, polymer with
    1,4-benzenedicarboxaldehyde (9CI) (CA INDEX NAME)

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CM 1
CRN 273199-72-7
CME C50 H50 O2 P2 . 2 Bz

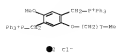


CM	2
CRH	623-27-8
CME	C6 HC 02

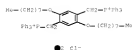


NN 273199-76-1 CAPLUS
 CN Phosphonium, [[2,5-bis(octyloxy)-1,4-phenylene]bis(methylene)]bis(triphenyl-, dichloride, polymer with 1,4-benzenediacetaldehyde and [[2-methoxy-5-(octyloxy)-1,4-phenylene]bis(methylene)]bis(triphenylphosphonium) dichloride (9CI) (CA INDEX NAME)

CM 1
CIN 252338-07-1
CIN C53 H56 O2 P2 2 C1



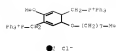
CM 2
CIN 140471-36-7
CIN C62 H70 O2 P2 2 C1



CM 3
CIN 623-27-8
CIN C8 H6 O2



RR 273338-77-2 CAPLUS
CIN Phosphonium, [(2,5-dimethoxy-1,4-phenylene)bis(methylene)]bis(triphenyl-
dichloride, polymer with 2-(4-bromophenyl)-5-methoxy-1,4-
[2-methoxy-5-(methylene)]bis(triphenylphosphonium) dichloride (PCI) (CA
INDEX NAME)
CM 1
CIN 252338-07-1
CIN C53 H56 O2 P2 2 C1



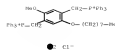
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CIN 66-98-8
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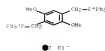
OS CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITING)

LA NUMBER 88 OF 109 CAPLUS COPYRIGHT 2010 ACS ON 8TH
ACCESSION NUMBER: 2009106723 CAPLUS Full-Text
DOCUMENT NUMBER: 23310162
TITLE: A novel series of copolymers containing
2,5-dicyano-1,4-phenylene-vinylene-Synthetic tuning
of the HOMO and LUMO energy levels of conjugated
polymers
AUTHOR(S): Xiao, Tang Yu; Wang-Lin Chua; Bo-ling Huang; Wei
Tian-tian of Materials Research and Engineering
(MRE), National University of Singapore, Singapore,
117572, Singapore
SOURCE: Chemistry-A European Journal (2009), 6(8),
2330-2342
CODEN: CHEMJD ISSN: 0947-4539
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB: A series of copolymers containing 2,5-dicyano-1,4-phenylenevinylene and 2-
methoxy-5-(2-ethylhexyloxy)-1,4-phenylenevinylene units were synthesized by
Kricheldorf reactions. The HOMO and LUMO energy levels of copolymers can be easily
tuned in the range of 0.7 to 2.0 eV. The copolymer can be changed from a
typical hole-transport material to a typical electron-transport material by
controlling the feed ratio of co-monomers. This method opens a novel way
for the synthesis of copolymers with tunable electronic properties for use in
organic light-emitting diodes (OLEDs).

IT 252338-07-1 273338-77-2
R11 F10 (Properties) 230 (Synthesis preparation); F100 (Preparation)
(synthetic tuning of the HOMO and LUMO energy levels of novel
conjugated copolymers containing dicyano-phenylene-vinylene units)
RR 252338-07-5 CAPLUS
CIN Phosphonium, [(2,5-dicyano-1,4-phenylene)bis(methylene)]bis(triphenyl-
dichloride, polymer with 2-(2-ethylhexyloxy)-5-methoxy-1,4-



CM 2
CIN 30273-64-0
CIN C46 H42 O2 P2 2 C1



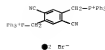
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CIN 623-27-8
CIN C8 H6 O2



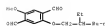
RR 273338-77-2 CAPLUS
CIN Phosphonium, [(2-methoxy-5-(methylene)]bis(triphenyl-
dichloride, polymer with 2-(4-bromophenyl)-5-methoxy-1,4-
[1,1'-biphenyl]-4,4'-dicarboxaldehyde (PCI) (CA INDEX NAME)
CM 1
CIN 252338-07-1
CIN C53 H56 O2 P2 2 C1

benzenedicarboxaldehyde (PCI) (CA INDEX NAME)

CM 1
CIN 232948-23-1
CIN C46 H36 N2 P2 2 R4

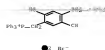


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CIN 203251-22-3
CIN C17 H24 O4



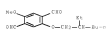
RR 277553-22-1 CAPLUS
CIN Phosphonium, [(2,5-dicyano-1,4-phenylene)bis(methylene)]bis(triphenyl-
dichloride, polymer with 2-(12-ethylhexyloxy)-5-methoxy-1,4-
benzenedicarboxaldehyde and 12-[(2-ethylhexyloxy)-5-methoxy-1,4-
phenylene]bis(methylene)]bis(triphenylphosphonium) dichloride (PCI) (CA
INDEX NAME)
CM 1

CM 2
CIN 232948-23-1
CIN C46 H36 N2 P2 2 R4



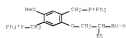
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CIN 203251-22-3

CMF C17 H24 O4



CM 3

CRN 185446-05-3
CMF C53 H56 O2 P2 - 2 Br



OS CITING REF COUNT: 26 THERE ARE 26 CAPLUS RECORDS THAT CITE THIS RECORD (16 CITINGS)
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 NUMBER 89 OF 109 CAPLUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 20041295376 CAPLUS Full-Text
DOCUMENT NUMBER: 133159158
TITLE: Molecular design of 1,4-bis(methylene) polymers
AUTHOR(S): Yu, J. W.; Kim, J. K.; Hong, J. M.; Kim, T. C.; Cho, H. W.; Kim, D. Y.; Kim, C. T.
CORPORATE SOURCE: Polymer Materials Laboratory, Korea Institute of Science and Technology, Seoul, 130-650, S. Korea
SOURCE: Chinese Journal of Polymer Science [C, W], 10(1), 227-237
CODEN CJPSDH ISSN: 0256-7679
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Fluorene-based alternating and statistical copolymers were synthesized by employing reaction methods of Wittig, Heck and Suzuki. The copolymers were classified into three groups with the photoluminescence (PL) emission maxima at 420, 475 and 500 nm, resp. Statistical copolymers with two chromophores having PL emission maxima at 420 and 475 nm emitted light with the emission efficiency of 37.5% on 100% excitation at 365 nm and displayed the quantum efficiency by the energy transfer. However, the intramolecular energy transfer was insufficient compared to the intermolecular energy transfer when the two chromophores were apart from each other in the range of the Forster critical distance. Fluorene-pyridinevinylene alternating copolymer was synthesized

by the Wittig reaction and found to have phys., electronic and electrochem. properties of the individual units intact. The double-layered (1,4-bis(methylene) diene (1,4D)) with the statistical copolymer as an emitting layer and the pyridine-containing copolymer as an electron-transporting hole blocking layer, which were sandwiched between ITO and Al, displayed a quantum efficiency of 1.3%.

II 20010701-01 25(3)76-10-19 26(2)36-15-76 28(10)76-20-91
RE: DRY (Device component use); FPD (Properties); SEM (Synthetic preparation); FPD (Preparation); USE (Chem.)
(mol. design of 1,4-bis(methylene) polymers and their properties)
RN 202150-14-1 CAPLUS
CM Phosphonium, 1,1'-(9,9'-diheptyl-9H-fluorene-2,7'-diyl)bis(methylene)bis[1,1'-triphenyl-4,4'-biphenyl-5,5'-diylidene] (CA INDEX NAME)
CM 1
CRN 187148-76-1
CMF C53 H66 P2 - 2 Br



CM 2
CRN 423-27-8
CMF C8 H6 O2

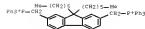


RN 202150-14-1 CAPLUS
CM Phosphonium, 1,1'-(9,9'-diheptyl-9H-fluorene-2,7'-diyl)bis(methylene)bis[1,1'-triphenyl-4,4'-biphenyl-5,5'-diylidene] (CA INDEX NAME)
CM 1
CRN 187148-76-1
CMF C53 H66 P2 - 2 Br

RN 278180-50-8 CAPLUS
CM Phosphonium, 1,1'-(9,9'-diheptyl-9H-fluorene-2,7'-diyl)bis(methylene)bis[1,1'-triphenyl-4,4'-biphenyl-5,5'-diylidene] (CA INDEX NAME)
CM 1
CRN 278180-49-5
CMF C18 H26 O4



CM 2
CRN 187148-76-1
CMF C53 H66 P2 - 2 Br



OS CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 NUMBER 90 OF 109 CAPLUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 20041295376 CAPLUS Full-Text
DOCUMENT NUMBER: 133159158
TITLE: Blue electroluminescence in blend of polymers containing carbazole and 1,5,4-quinoxaline units
AUTHOR(S): Jin, Sang-Ho; Kim, Woo-Bong; Song, In-Sung; Kwon, Soon-Ril; Lee, Kwang-Hik; Han, Sun-Mo
CORPORATE SOURCE: Polymer Laboratory, Samsung Advanced Institute of Technology (SAIT), P.O. Box 107, Yusong, Taejeon, S. Korea
SOURCE: Thin Solid Films [3, W], 363(1,2), 255-258
CODEN THINFM ISSN: 0040-6090
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal

CM 2
CRN 54931-44-7
CMF C7 H5 N O2



electron-transporting layer, exhibited an electroluminescence (EL) emission maximum at 475 nm with a full width at the half maximum (FWHM) of 50 nm and a quantum efficiency of 0.1%, where indium tin oxide (ITO) and Al were used as the anode and cathode, resp.

IT 20070013
 RI: DEV (Device component use), PFP (Properties), SPN (Synthetic preparation), PFP (Preparation), USE (Use)
 (alternating copolymer consisting of light-emitting fluorenevinylene units and pyridine electron-transporting units)

RI 20210-16-3 CAPLUS
 RI Phenanthrene, [5,5'-di(henyl)-2H-fluorene-2,7-diyl]bis(henyl)bis[1,1'-triphenyl]-, dihydro, polymer with 2,6-pyridinedicarboxaldehyde (PC1) (CA INDEX NAME)

ON 1
 CRI 197448-76-1
 CIP C43 H44 F2 - 2 Br

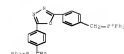


ON 2
 CRI 5432-44-3
 CIP C75 H50 O2



ON CITING REF COUNT: 35 THERE ARE 35 CAPLUS RECORDS THAT CITE THIS REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REF FORMAT

16 NUMBER 84 OF 109 CAPLUS COPYRIGHT 2010 ACS ON STM
 ACCESSION NUMBER: 1997467702 CAPLUS FULL-TEXT
 DOCUMENT NUMBER: 131221474
 TITLE: Oxadiazole-containing phenylene vinylene ether linkage copolymer as blue-green luminous and electron-transport material in polymer light-emitting diodes
 AUTHOR(S): Lee, Yuh-Sheng; Chen, Shou-Jen



ON 2
 CRI 20485-13-9
 CIP C32 H42 O8



IT 20070013
 RI: ACT (Reactant), RCT (Reagent or reagent)
 (oxadiazole-containing phenylene vinylene ether linkage copolymer as blue-green luminous and electron-transport material in polymer light-emitting diodes)

RI 603-35-0 CAPLUS
 RI Phosphine, triphenyl- (CA INDEX NAME)



ON CITING REF COUNT: 34 THERE ARE 34 CAPLUS RECORDS THAT CITE THIS REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REF FORMAT

16 NUMBER 85 OF 109 CAPLUS COPYRIGHT 2010 ACS ON STM
 ACCESSION NUMBER: 1995137914 CAPLUS FULL-TEXT
 DOCUMENT NUMBER: 131122474
 TITLE: Synthesis of organic EL materials with cyano group and evaluation of emission characteristics in organic EL devices

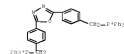
AUTHOR(S): Kim, Jong Uk
 CORP: Science Education, Tempo National Univ., Education, Tempo, 705-115, S. Korea
 SOURCE: Journal of the Korean Chemical Society 12(2)

CORPORATE SOURCE: Chemical Engineering Department, National Tsing-Hua University, Hsinchu, Taiwan
 SOURCE: Synthetic Metals 125(9), 10513, 195-190
 CODEN: SYMEDI; ISSN: 0379-6739
 JOURNAL: Elsevier Science S.A.

PUBLISHED: 1997
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB No report studies on a new ether-type poly(phenylene vinylene) (PPV) copolymer containing oxadiazole groups in the conjugated main chain. It can be used as a blue-green electroluminescence material and as an electron-transporting hole-blocking material in polymer light-emitting diodes using PPV as the emitting material. The bilayer device with aluminum cathode shows a maximum brightness of about 300 cd/m² at about 31 V and a maximum external quantum efficiency of 0.1%. The quantum efficiency of the bilayer device is enhanced by a factor of 1.95 in comparison with that of the single layer device of PPV.

IT 20070013
 RI: DEV (Device component use), PFP (Properties), SPN (Synthetic preparation), PFP (Preparation), USE (Use)
 (oxadiazole-containing phenylene vinylene ether linkage copolymer as blue-green luminous and electron-transport material in polymer light-emitting diodes)

RI 22161-16-1 CAPLUS
 RI Phosphonium, 1,1'-(1,3,4-oxadiazole-2,5-diylbis(4-phenylene))bis[1,1'-triphenyl]-, bromide (1:2) (CA INDEX NAME)



IT 198361-32-42
 RI: DEV (Device component use), PFP (Properties), SPN (Synthetic preparation), PFP (Preparation), USE (Use)
 (oxadiazole-containing phenylene vinylene ether linkage copolymer as blue-green luminous and electron-transport material in polymer light-emitting diodes)

RI 24626-12-4 CAPLUS
 RI Phosphonium, 1,1'-(5,6-oxadiazole-2,5-diylbis[1,1'-phenylene])bis[1,1'-triphenyl]-, dibromide, polymer with 4,4'-(1,12-dodecanediyl)bis(oxy)bis[1,3,4-dioxolene]diol (PC1) (CA INDEX NAME)

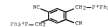
ON 1
 CRI 222618-56-1
 CIP C32 H42 N8 O2 - 2 Br

1, 43(3), 315-320
 CODEN: SYMEDI; ISSN: 1031-2548
 PUBLISHED: Korean Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: Korean

AB Novel blue-green electroluminescence materials were designed and synthesized. Polymers, P-DCN, and low molecular weight materials with the same chromophore, P-DCN, were synthesized. A model structure of new chromophore material was bis(phenylene) derivative with cyano groups for electron-transport and transport with phenylamine groups for hole injection and transport. These devices were used a device with P-DCN and D-DCN as an emission layer which is a single-layer device (SL), a device with indium tin oxide (ITO)/emission layer/Alq₃ as a D-E device and a device with ITO/triphenylamine derivative/emission layer/Alq₃ as a D-E device. The two emission materials, P-DCN and D-DCN with the same emission-chromophore were evaluated in high current EL emission maximum peaks of two materials were detected at about 640 nm wavelength of red emission region.

IT 22261-16-1
 RI: ACT (Reactant), RCT (Reagent or reagent)
 (synthesis of organic electroluminescence materials using)

RI 232946-23-1 CAPLUS
 RI Phosphonium, 1,1'-(1,2,5-dicyano-1,4-phenylene)bis[1,1'-triphenyl]-, bromide (1:2) (CA INDEX NAME)



16 NUMBER 84 OF 109 CAPLUS COPYRIGHT 2010 ACS ON STM
 ACCESSION NUMBER: 1999134620 CAPLUS FULL-TEXT
 DOCUMENT NUMBER: 131733024
 TITLE: Organic electroluminescence polymer for light-emitting diodes and devices

INVENTOR(S): Jin, Sang-Ho; Kim, Woo-Hong; Son, Hyung-Jee; Song, Jin-Sung; Han, Sun-M.
 PATENT ASSIGNEE(S): Samsung Display Devices Co. Ltd., S. Korea; Samsung Chemical Chemicals Co. Ltd.
 SOURCE: KR Pat. Appl., 47 pp
 CODEN: DAVIDO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACROSS COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2328212	A	19990217	GB 1998-11750	19990806
GB 2328212	B	20001129		
GB 11128511	A	19990511	JP 1998-225451	19990810
JP 2794740	B2	19991109		



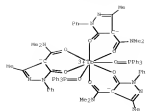
FBI 223262-04-2 CAPLOS

CN Terbutium, tris[ethyl 4,5-dihydro-3-methyl-5-(oxo-NO)-1-phenyl-1H
 pyrazole-6-carboxylato-NO4]bis(triphenylphosphine oxide-NO)-
 (PC1) (CA INDEX NAME)



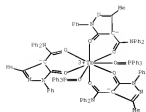
202 223262-06-4 CAPLOC

Terbium, tris[4,5-dihydro-N,N,3-trimethyl-3-(oxo- κO)-1-phenyl-1H-pyrazole-4-carboxamidato- κO_4]bis(triphenylphosphine oxide- κO)-(SC1) (CA INDEX NAME)



RN 223262-07-5 CAPLOS

CH Terbium, tris[4,5-dihydro-3-methyl-5-(oxo- κO)-8,8,1-triphenyl-1H-pyrazole-4-carboxamidato- κO]bis(triphenylphosphine oxide- κO)-(9CI) (CA INDEX NAME)



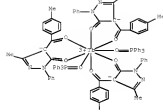
BN 223262-08-6 CAPLUS

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CN Terbutium, tris[2,4-dihydro-5-methyl-4-(4-methylbenzoyl- $\kappa$ O)-2-phenyl-
3H-pyrazol-3-oxato- $\kappa$ O3]bis(triphenylphosphine oxide- $\kappa$ O)- (CA
INDEX NAME)

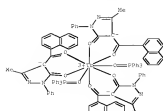
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PAGE 1-A



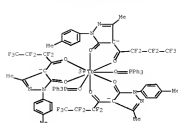
PAGE 223262-02-7 CAPLOS

Terbium, tris(2,4-dihydro-5-methyl-4-(1-naphthalenylcarbonyl-oxo)-1-phenyl-3H-pyrazol-3-onato-oxo)bis(triphenylphosphine oxide-oxo) = (9CI) (CA INDEX NAME)



800 223262-10-0 CAP108

CN Terbins, triaz[4-(2,2,3,3,4,4,4-heptafluoro-1-(oxo- κ O)butyl)-2,4-



OS CITING REF COUNT: 36 THERE ARE 36 CAPLUS RECORDS THAT CITE THIS
RECORD (36 CITINGS)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL OVERGROUND MATERIAL IN THE DE POSITS

LG ANSWER 90 OF 109 CHAPTER COPYRIGHT 2010 ACS 90 8TH

ACCESSION NUMBER: 1999.9912 CAPLOS F.

DOCUMENT NUMBER: 130:102684

TITLE: REACTIVE POLYMERIZABLE MA
INVENTOR(S): Kashiwamathas, Po

PATENT ASSIGNEE(S): South Bank University

SOURCE: ECT Int. Appl., 39 pp.

DOCUMENT TYPE: COORN: P1XXD2
Base of

DOCUMENT TYPE: Patent
LANGUAGE: English

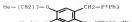
FAMILY ACC: NUM COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPL.
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[illegible][illegible]

● **2. BE⁺**



ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LEXUS DISPLAY FORMAT

24 A device having a stepped layered structure of *laminated* organic films is described, in which the *laminated* organic films are stacked on top of each other separated by conducting transparent metallic layers. A *light* source can illuminate a portion of a thin *electrochromic* emissive layer (EL), possibly sandwiched between two transparent layers and the EL, to produce a light emission. The device produces a desired combination of discrete wavelengths (e.g., red, green and blue) by applying appropriate elec. potentials between the metallic layers to the EL. The EL can be an emissive complex of metals and organic ligands (e.g., trivalent metal quinolinolate complexes or zinc Schiff base complexes). A number of suitable bidentate ligands are also described. Other variations of the structure can be used, such as the use of different materials and variations (including a hermetically sealed device) and fabrication methods.

17 RL: DEV (Device component use); USES (Uses)
(fabrication and components of organic \rightarrow structure \rightarrow device with multi-layered structure)

PM 62637-BQ-3 CARLOS
 CR Platinum, [2,3-di(mercapto-KS)-2-butenedinitrileato(2-
)]bis(triphenylphosphine)-, (BP-4-2)- (CA INDEX NAME)



OS.CITING REF COUNT: 12 THERE ARE 12 CASUS RECORDS THAT CITE THIS
RECORD (14 CITINGS)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS

16 ANSWER 108 OF 109 CAPLUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 1996:539097 CAPLUS Full-text
DOCUMENT NUMBER: 125:28Y55
ORIGINAL REFERENCE NO.: 125:53603a, 53606a

TITLE: Systematic investigation of the effects of organic film structure on logic emitting diode performance

AUTHOR(S): Jaselsky, M. G.; Campbell, T. H.; Bessabekov, M. M.

CORPORATE SOURCE: Los Alamos National Lab., Los Alamos, NM, 87545, USA
SOURCE: Journal of Applied Physics (1996), 80(5), 2863-2890
CODEN: JAPLAD; **ISSN:** 0021-8995
PUBLISHED: American Institute of Physics

AB The effects of organic film structure on LED performance was studied. Metal/organic film/metal LEDs were fabricated using a 5 ring, poly(phenylene vinylene) related oligomer as the active layer. The structure of the vacuum

© 2002 Wiley Periodicals, Inc. *J Polym Sci Part A: Polym Chem* 40: 1251–1260, 2002
Published online 10 May 2002 in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/pola.10063

ABSTRACT: The electroluminescence (EL) characteristics in EL devices made of vacuum-sublimed dye and spin-coated polymer films were compared. Low-molar-mass dye, 4,4'-bis[2,6-dimethyl-5-phenyl-1,3,5-triazine-2-yl]diphenylmethane (BDA), and high-molar-mass dye, 4,4'-bis[2,6-dimethyl-5-(4-phenylphenyl)-1,3,5-triazine-2-yl]diphenylmethane (BDA-PP), and polymer of spin-coated dye and polymer of vacuum-sublimed film, and polymer with BSA chromophore linked with alkyl ether groups (polymer-BBA) were employed. Single-layer devices, indium-tin-oxide/polymer-BDA/ITO, polymer-BDA-PP/ITO, polymer-BBA/ITO, and polymer-BDA/ITO devices showed good EL performances were compared. Double-layer devices which have an oxidazole (ITO/ITO-PPD) and a polymer-BDA/ITO device were also prepared. The EL properties of the ITO/polymer-BBA/ITO-PPD/ITO device were also prepared. The J - V and J - V - L relationships between dye-BDA devices and polymer-BBA devices were considerably different from those of the polymer-BBA devices. The J - V and J - V - L relationships of the luminance- d relationships of the devices with two classes of BBA films showed that the polymer-BBA devices exhibited similar EL characteristics as the polymer-BBA devices and the polymer-BBA devices. The results suggest the possibility of the use of common material design concept for low-molar-mass

IT 27242-18-2
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(comparison of device performance in two thin-film
structures) (Device made of various materials and

spin-coated polymer film)
 171422-55-2 CAPLOS
 Phosphonium, [1,4-phenylenebis(methylene)]bis(triphenyl-, dibromide,
 polymer with 4,4'-(1,8-octanediyl)bis[oxa(4,4'-
 phenylene(phenylimino)]bis(benzaldehyde) (PCI) (CA INDEX NAME)

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CRM 166728-26-1

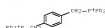
CMF C46 R44 N2 O4



CM 2

CM 40817-03-6

CM 40817-03-6

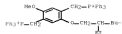


OS_CITING REF COUNT: 14 THERE ARE 14 CAPLUS RECORDS THAT CITE THIS
RECORD (14 CITINGS)

[illegible]

11 161315-51-6
 RE: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with stilbenealdehyde and butoxide)
 RN 161960-51-6 CATION

CN Phosphonium, 1,1'-[[2-[(2-ethylhexyl)oxy]-5-methoxy-1,4-phenylene]bis(methylene)]bis[1,1,1-triphenyl-, chloride (1:2) (CA INDEX



L6 ANSWER 109 OF 109 CAPLUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 1995:957521 CAPLUS Full-text
DOCUMENT NUMBER: 124:10417

ORIGINAL REFERENCE NO.: J24:2171a,2171b
TITLE: Comparison of device performance in two thin-film
"HETEROLAYER" devices made of
vacuum-sublimed dye film and spin-coated polymer film

AUTHOR(S): vacuum-sublimed dye films and spin-coated polymer films
Kim, Dong Uk; Amisaka, Ei-ichiro; Tautsui, Tetsuo; Saito, Shogo

CORPORATE SOURCE: Dep. of Materials Science and Technology, Kyushu Univ., Fukuoka, 816, Japan

SOURCE: Japanese Journal of Applied Physics, Part 1: Regular Papers, Short Notes & Review Papers (1992),

PUBLISHER: Japanese Journal of Applied Physics
DOCUMENT TYPE: Journal
LANGUAGE: English

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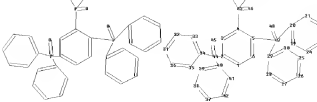
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OR (ELECTION INJECTION))
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chain nodes :
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ring nodes :
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29-30 31-32 31-36 32-33 33-34 34-35 35-36 37-38 37-42 38-39 39-40 40-41
41-42
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exact bonds :
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overlaid bonds :
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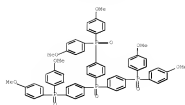
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ACCESSION NUMBER: 19991511999 CAPLUS Full-Text
DOCUMENT NUMBER: 15-1727923
TITLE:
Synthesis and IR spectra of derivatives of the

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57 58 59 60 61 62
chain bonds :
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ring bonds :
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49-50 50-51 51-52 53-54 54-55 55-56 56-57 58-59 59-60 60-61 61-62
Match level :
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11Atom 12Atom 13Atom 14Atom 15Atom 16Atom 17Atom 18Atom 19Atom
20Atom 21Atom 22Atom 23Atom 24Atom 25Atom 26Atom 27Atom 28Atom 29Atom 30Atom 31Atom 32Atom 33Atom 34Atom 35Atom 36Atom 37Atom 38Atom 39Atom 40Atom 41Atom 42Atom 43Atom 44Atom 45Atom 46Atom 47Atom 48Atom 49Atom 50Atom 51Atom 52Atom 53Atom 54Atom 55Atom 56Atom 57Atom 58Atom 59Atom 60Atom 61Atom 62Atom

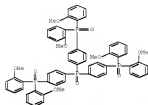
poly[di(phenylphosphine)benzenes], (Ph2PC6H5)n (n = 2 to 4)
AUTHOR(S): McFarlane, H. Christine E.; McFarlane, William
CORPORATE SOURCE: Department of Chemistry, University of Newcastle upon Tyne, Newcastle upon Tyne, NE1 7RU, UK
SOURCE: Polyhedron (1999), 18(16), 2317-2327
PUBLISHER: Elsevier Science Ltd
DOCUMENT TYPE: Journal
ABSTRACT: 111 Derive of the poly[di(phenylphosphine)benzenes], (Ph2PC6H5)n (n = 2 to 4) obtained by oxidation or reaction with E. S. S. cobaltocene, (Cp)2Co (Cp = C5H5), Mo, W, (Cp)2CoCl2, or (Cp)2CoCl2 (M = Mo, W), are reported together with their IR and selected other IR parameters. The reactions generally follow predictable courses, although stereocenter factors affect the range of products obtained and can lead to significant structural distortion in extreme cases. The IR chemical shifts and more particularly various coupling constants are also markedly influenced by such factors, to the extent that in species with three or more adjacent PR2 moieties they may be of limited diagnostic value.
L1 2037-17-17, 1,2,3,4-Tetrakis(diphenylphosphine)benzene
R1a PR2 (Preparation), IR2 (Synthetic Preparation), PR2 (Preparation)
(Preparation and phosphorus-13 NMR of)
R2 24537-17-17, C6H5P
R3 Phosphine oxide, diphenyl[1,2,3,4-tetrakis(diphenylphosphine)phenyl]- (CA INDEX NAME)



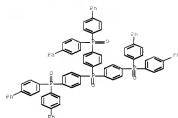
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L4 1.12
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L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 200113700 CAPLUS Full-Text
DOCUMENT NUMBER: 15136649
TITLE:
Organic electrochromic device and its manufacturing method
INVENTOR(S): Goto, Takanobu; Hando, Koji; Wakihara, Tatsu; Ueda, Akiyuki; Matsumoto, Takaki
PATENT ASSIGNMENT(S): Nippon Electric Power Co., Ltd., Japan; Denso Co., Ltd.
SOURCE: JP Kohai Tokyo Kaho, 26pp.
CJCN 2004F
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY AND: NUM. COUNT: 1
PATENT INFORMATION:
PATENT NO. KIND DATE APPLICATION NO. DATE
JP 200021238 A JP 2000917 JP 2000-52552 25095303
PRIORITY APPL. INFO. JP 2000-52552 25095303
The invention relates to an organic electrochromic device, comprising a 2nd particle-dispersed organic layer containing phosphorus compound represented by (R2O)3PR3 (R2=alkyl or aryl; R3=alkyl or aryl), wherein the 2nd particle-dispersed organic layer is suited for use as an electron transport layer in order to realize a low voltage-driven device.
L1 2037-17-17, R1: TM (Technical or engineered material use); US28 (User)
R2 24537-17-17, C6H5P
R3 Phosphine oxide, tri[4-(diphenylphosphine)phenyl]- (CA INDEX NAME)



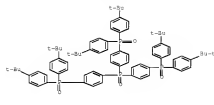
RD 065520-17-6 CAPLUS
 CD Phosphine oxide, tris[4-[bis(2-methoxyphenyl)phosphoryl]phenyl]- (PCI) (CA INDEX NAME)



RD 065520-21-2 CAPLUS
 CD Phosphine oxide, [4-[bis[4-(1-naphthalenylphenyl)phosphoryl]phenyl]-1-ylidenebis[2-methoxyphenyl]- (PCI) (CA INDEX NAME)



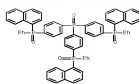
RD 065520-26-7 CAPLUS
 CD Phosphine oxide, tris[4-[bis[4-(1,1-dimethyl-4-ethylphenyl)phosphoryl]phenyl]- (PCI) (CA INDEX NAME)



06 CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITING)
 REFERENCE COUNT: 0 THERE ARE 0 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE TO THE RE FORMY

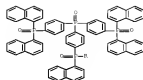
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RD 065520-22-3 CAPLUS
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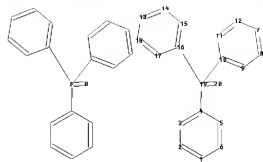
PAGE 1-A



PAGE 2-A



RD 065520-24-5 CAPLUS
 CD Phosphine oxide, tris[4-[bis[1,1'-biphenyl]-4-yl]phosphoryl]phenyl]- (PCI) (CA INDEX NAME)



chain nodes :
 19 20
 ring nodes :
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
 chain bonds :
 4-19 10-19 16-19 19-20
 ring bonds :
 1-2 3-4 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12 13-14 13-18 14-15
 15-16 16-17 17-18
 exact/north bonds :
 19-20
 exact bonds :
 4-19 10-19 16-19
 normalized bonds :
 1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12 13-14 13-18 14-15
 15-16 16-17 17-18

Match level :
 1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
 11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:CLASS

L7 STRUCTURE UPLOADED

=> = 17 new full
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 FULL SCREEN SEARCH COMPLETED - 32269 TO ITERATE

100 CA PROCESSED 32269 ITERATIONS
 SEARCH TIME: 00:00:01

9543 ANSWERS

18 9543 SEA 222 FUL 17

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=> file caplux
=> n 10
L9          7517 14
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=> 19 and (electroluminescence or electroluminescent or (light emitting) or OLED)

27061 ELECTROLUMINESCENCE
30 ELECTROLUMINESCENCES
27066 ELECTROLUMINESCENCE
(ELECTROLUMINESCENCE OR ELECTROLUMINESCENCES)
5 ELECTROLUMINESCENCE
27069 ELECTROLUMINESCENCE
(ELECTROLUMINESCENCE OR ELECTROLUMINESCENCES)

Q ELECTROLUMINESCENT
1359112 LIGHT
12960 LIGHTS
1363453 LIGHT
(LIGHT OR LIGHTS)
1446855 EMITTING
237 EMITTING
1447551 EMITTING
(EMITTING OR EMITTING)
19437 LIGHT EMITTING
(LIGHT (W)EMITTING)
7828 OLED
3876 OLEDs
9794 OLED

L10 166 L3 AND {ELECTROLUMINESCENCE OR ELECTROLUMINESCENT OR (LIGHT
EMITTING) OR OLED}

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=> 110 and (py<=2005 or ay<=2005)
      26338947 PY<=2005
      5543817 AY<=2005
L11      82 L10 AND (PY<=2005 OR AY<=2005)
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L11 ANSWER 1 OF 82 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2007:460610 CAPLUS Full-text

DOCUMENT NUMBER: 146,451701
TITLE: Organic electrochromance display showing high fast-switching rate low voltage driving, an extended service life

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INVENTOR(S):      Tohs, Yasumasa; Tanaka, Hiroaki; Odachi, Yoshitake;
                  Suda, Yasumasa; Yagi, Tameo
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE:           Jpn. Kokai Tokkyo Koho, 101pp.
                  CODEN: JKKKAF
DOCUMENT TYPE:    Patent
LANGUAGE:         Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

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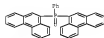
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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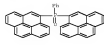
FBI 934704-38-8 CARLOS
 CS Phosphine oxide, diphenyl[4-(10-phenyl-9-anthracenyl)phenyl]- (CA INDOX
 NAME1



PZ 934704-33-9 CAPLUS
 CN Phosphine oxide, di-9-phenanthrenylphenyl- (CA INDEX NAME)



FOR 934704-00-2 CAPLOS
 USE phosphine oxide, perydi-4-pyrenyl (C-1204) used

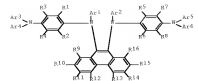


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934704-41-3  CAPIUS
Phosphine oxide, [4-(2,2-diphenylethenyl)phenyl]diphenyl- (CA INDEX NAME)

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JP 2007109988 A 20070426 JP 2005-301171 20051017 <--
PRIORITY APPL: INFO : JP 2005-301171 20051017
OTHER SOURCE(S) : HARPAT 146:451781
CT



AB The title organic electroluminescence display includes a luminescent layer and a p⁺ hole injection layer, wherein the p⁺ hole injection layer contains a compound represented by I (R1-R5 = H, monovalent aliphatic hydrocarbyl, monovalent aromatic hydrocarbyl; Ar1-6 = monovalent aromatic hydrocarbyl) showing a glass transition temperature of 210°. Also specified compounds for a p⁺ hole transport layer and an electron injection layer are included in the organic electroluminescent display.

IT 11106-14-0 01406-13-1 01410-13-0
 01420-13-0 01430-13-0 01440-13-1
 01450-13-0 01460-13-1 01470-13-0
 01480-13-1 01490-13-0

RE: TEM (Technical or engineered material use); USES (Uses)
 (in electron injection layer of organic electroluminescent
 display showing high heat-resistance, low voltage driving, and extended

service life)
 HN 110988-94-8 CAPLUS
 CN Phosphine oxide, diphenyl-1-pyrenyl- (CA INDEX NAME)



RN 934704-37-1 CASREG
CN Phosphine oxide, 3-terphenyldiphenyl- (CA INDEX NAME)



RN	934704-43-5	CAPLUS	
CN	9H-Carbazole, 9-[4-(diphenylphosphoryl)phenyl]-		ICA INDEX NAME



RN	934704-45-7	CAPLUS	
CN	9H-Carbazole, 3-(diphenylphosphinyl)-9-phenyl-		ICA INDEX NAME



RN 934706-47-9 CAPLUS
CN 1-3-4-Camphorcode; 2-4-(4-chlorophenyl)pyridine-1-yl-1-naphthalenyl)-3-1-naphthalenyl)- (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 NUMBER 10 OF 82 CAPSUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 2006-1612402 CAPSUS Full-text
DOCUMENT NUMBER: 145-380449
TITLE: Lighting device, image pickup apparatus and portable terminal unit
INVENTOR(S): Iwanaga, Hiroaki; Anano, Akio; Ohnawa, Kenji
PATENT ASSIGNER(S): Otsuka, Yamaki
SOURCE: Kokusai Gakka Toshin, Japan
N.P. Pat. Appl. Publ. 15 pp
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PARENT INFORMATION:

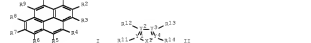
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060214570	A1	20060928	US 2006-148412	20060207
US 201107189	B2	20091103		
JP 200617489	B2	20061012	JP 2005-92289	20050328
JP 4200605	B2	20060905		

PRIORITY AFFILI. INFO: 1 JP 2005-92289 A 20050328
OTHER SOURCE(S): 1 MARPAT 145380449
AB A lighting device is described comprising a supporting member, a light emitting element disposed on the supporting member, and emitting light from an upper and side surfaces thereof, a first fluorescent layer containing an organic phosphor and disposed on the supporting member, and a second fluorescent layer containing only an inorganic phosphor and disposed on the supporting member, wherein the second fluorescent layer is disposed to cover the upper and side surfaces of the light emitting element, and the first fluorescent layer is disposed on at least side surface of the light emitting element with the second fluorescent layer being interposed between the light emitting element and the first fluorescent layer. An image pickup device comprising the lighting device is also described. A portable terminal unit comprising the image pickup element is also described.

II A1-1, 2, 3
RI: DEV (Device component use); USES (Uses)
RI: Lighting device, image pickup apparatus using phosphor layer
RI 83631-12-0 CAPSUS
RI European, tri(4,6,7,8,9,8-heptafluoro-2,2-dimethyl-3,5-norbornadieno-6,9-diyl)phosphine oxide-60 (CA INDEX SOURCE)
RI tri(phenylphosphine oxide)-60 (CA INDEX SOURCE)

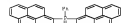
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2009064243	A1	20090312	US 2007-817143	20070924
US 201128141	A	20090320	US 2006-0304263	20070927
PRIORITY AFFILI. INFO: 1			JP 2005-10282 A	20050225
			WO 2006-0303284	20060223

ABSTRACT HISTORY FOR US PATENT AVAILABLE IN LENS DISPLAY FORMAT
OTHER SOURCE(S): 1 MARPAT 145380452
II



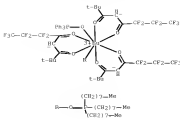
AB The invention relates to a material for a light emitting device comprising a pyrene compound represented by a general formula (I) where R1 to R10 independently represent a specific functional group, provided that at least one of R1 to R10 represents a substituent represented by a general formula (II) where R11 to R14 independently represent a specific functional group, provided that any one of R11 to R14 is used for the single bonding to the pyrene backbone. R1 represents any one of the groups of -CH₃, -C₂H₅, -H(R15) R1 to R4 are independently selected from a nitrogen atom and a carbon atom, provided that at least one of R1 to R4 is a nitrogen atom and at least one of R1 to R4 is a carbon atom and, when R1 is a nitrogen atom, the nitrogen atom has no substituent attached. R15 represents a specific functional group. By using this material, a light emitting device having higher light-emitting efficiency and excellent durability can be provided.

II 727-10-1, 2
RI: DEV (Device component use); TM (Technical or engineered material use); USES (Uses)
RI: Material for light emitting device and light emitting device
RI 72369-10-1 CAPSUS
RI Phosphine oxide, phenylidene-pyrene-1 (CA INDEX SOURCE)



08 CITING REF. COUNT: 2 THERE ARE 2 CAPSUS RECORDS THAT CITE THIS RECORD
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 NUMBER 12 OF 82 CAPSUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 2006-1617321 CAPSUS Full-text
DOCUMENT NUMBER: 145-128148



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 NUMBER 11 OF 82 CAPSUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 2006-1608777 CAPSUS Full-text
DOCUMENT NUMBER: 145380482
TITLE: Material for light emitting element and light emitting element
INVENTOR(S): Sugimoto, Kenzou; Maeno, Shigetoshi; Kikunaga, Shinsuke; Nagao, Katsunori; Ogasawara, Takafumi; Teraoka, Toshiaki
PATENT ASSIGNER(S): Sony Industries, Inc., Japan
SOURCE: PCT Int. Appl. 7pp
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PARENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 200609772	A1	20060831	WO 2006-303214	20060223
US 20060214570	A1	20060928	US 2006-148412	20060207
US 201107189	B2	20091103		
JP 200617489	B2	20061012	JP 2005-92289	20050328
JP 4200605	B2	20060905		

PRIORITY AFFILI. INFO: 1 JP 2005-92289 A 20050328
OTHER SOURCE(S): 1 MARPAT 145380482
ABSTRACT HISTORY FOR US PATENT AVAILABLE IN LENS DISPLAY FORMAT
OTHER SOURCE(S): 1 MARPAT 145380482
II

ABSTRACT HISTORY FOR US PATENT AVAILABLE IN LENS DISPLAY FORMAT
OTHER SOURCE(S): 1 MARPAT 145380482
II

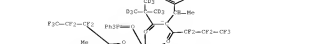
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US 20060214570	A1	20060928	US 2006-148412	20060207
US 201107189	B2	20091103		
JP 200617489	B2	20061012	JP 2005-92289	20050328
JP 4200605	B2	20060905		

PRIORITY AFFILI. INFO: 1 JP 2005-92289 A 20050328
OTHER SOURCE(S): 1 MARPAT 145380482
II

ABSTRACT HISTORY FOR US PATENT AVAILABLE IN LENS DISPLAY FORMAT
OTHER SOURCE(S): 1 MARPAT 145380482
II

ABSTRACT HISTORY FOR US PATENT AVAILABLE IN LENS DISPLAY FORMAT
OTHER SOURCE(S): 1 MARPAT 145380482
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ABSTRACT HISTORY FOR US PATENT AVAILABLE IN LENS DISPLAY FORMAT
OTHER SOURCE(S): 1 MARPAT 145380482
II



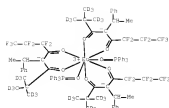
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OTHER SOURCE(S): 1 MARPAT 145380482
II

ABSTRACT HISTORY FOR US PATENT AVAILABLE IN LENS DISPLAY FORMAT
OTHER SOURCE(S): 1 MARPAT 145380482
II



PAGE 2-A

KN 906355-01-2 CAPLUS
 CN European, tria[6,6,7,7,8,8-heptafluoro-2,2-di(methyl)-di-8-(1-phenylethyl)-3,5-octadecanoate-2,1,1-d3-ato-
 w3,w3]](triethoxyphosphine oxide-w3)](triethoxyphosphine oxide-w3)- (9C1) (CA INDEX NAME)



KN 906356-00-1 CAPLUS
 CN European, tria[3-(6-fluoro-2,3-dihydro-1H-inden-1-yl)-2,4-pentadecanoate-
 w3,w3]](triethoxyphosphine oxide-w3)](triethoxyphosphine oxide-w3)- (9C1) (CA INDEX NAME)

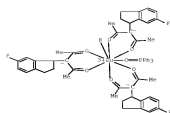


PAGE 2-A

OR CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
 (1 CITINGS)

L11 ANSWER 13 OF 52 CAPLUS COPYRIGHT 2010 ACS ON STN
 ACCESSION NUMBER: 2006176437 CAPLUS [Full-Text](#)
 DOCUMENT NUMBER: 1451177056
 TITLE: Portable flash apparatus for optical imaging sensor
 INVENTOR(S): Sawaguchi, Hiroyuki; Amano, Masaki; Harada, Naohito; Kanakura, Takaharu; Shimomura, Kenji
 SOURCE: Toshiba Corp., Japan
 Jpn Kokai Tokkyo Koho, 18 pp.
 CIPER: 070624
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC NUM COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	APPLICATION NO.	DATE
JP 2006176437	A	20060727	JP 2005-8923	20050114 <-
PROSECUT APPL INFO:			JP 2005-8923	20050114
OTHER SOURCE(S):			NOBPA7 1451177056	
AB	The invention relates to a portable flash apparatus for an optical imaging sensor, comprising a 1st flash area containing a 1st blue-emitting LED chip and a 2nd flash area containing a 2nd blue-emitting LED chip and a red-emitting phosphor, and a 3rd flash area containing a 3rd blue-emitting LED chip and a red-emitting phosphor. The portable flash apparatus provides good light intensity and color rendering for a camera apparatus.			
II	A6-91, 1-1			
RI	RI: DEV (Device component use); US55 (Usual)			
KN	Portable flash apparatus for optical imaging sensor			
KN 906351-01-0 CAPLUS				
CN	European, tria[6,6,7,7,8,8-heptafluoro-2,2-dimethyl-3,5-octadecanoate- w3,w3]](triethoxyphosphine oxide-w3)](triethoxyphosphine oxide-w3)- (CA INDEX NAME)			

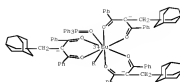


PAGE 1-A



PAGE 2-A

KN 906356-01-2 CAPLUS
 CN European, tria[1,3-bis(phenyl)-2-(tricyclo[3.3.1.1^{3,3}.1^{2,2}]-7-ylmethyl)-3,3-propenedioate-
 w3,w3]](triethoxyphosphine oxide-w3)](triethoxyphosphine oxide-w3)- (9C1) (CA INDEX NAME)

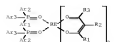


PAGE 1-A



L11 ANSWER 14 OF 52 CAPLUS COPYRIGHT 2010 ACS ON STN
 ACCESSION NUMBER: 2006158680 CAPLUS [Full-Text](#)
 DOCUMENT NUMBER: 145148121
 TITLE: Preparation of rare earth complexes with aryene bis(dialkylphosphinoimide) and acetylacetonate ligands
 INVENTOR(S): Huang, Wei Xue, Hui
 PATENT APPLICANT(S): Fudan University, Peop. Rep. China
 SOURCE: Fudan University Shengrong Gongshi Shuoshinghu, 17 pp.
 CIPER: 070624
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC NUM COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	APPLICATION NO	DATE
CH 167050	A	20051026	CH 2005-1003081	20050414 <-
PRIORITY APPL INFO:			CH 2005-1003081	20050414
OTHER SOURCE(S):			IPAPR07 145148121	
SI				



AB The title compound with a general formula I, wherein Ar1, and Ar2 are heteroaryl, aryl, or alkylaryl; and their derivs. substituted with alkyl, haloalkyl, haloaryl, haloalkyl, or alkylaryl; R1 to R3 are resp. alkyl, haloalkenyl alkyl, aryl, haloalkenyl alkyl, and alkylaryl; and R4 is rare earth

ion. The title preparation includes activating a first ligand acetylacetone derivative with NaOH in alic. solution; dissolving rare earth inorg. salts or rare earth organic compound in water or organic solvent to prepare a rare earth solution; dropwise adding the rare earth solution to the alic. solution to form a system; and adding arylene bis(diarylphosphino)oxide as the second ligand in the system to obtain the title complexes. The title complexes are used in electroluminescence device.

LT 816804-41-00 030402 03-00
 RL: RCT (Reactant); SYN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (Preparation of rare earth complexes with arylene bis(diary)phosphinimide
 and acetylacetonate ligands used as a ~~sample~~ ~~sample~~ device)
 RW 816808-41-00 CAPLOS
 CM Phosphine oxide, [8-(diphenylphosphinyl)-1-naphthalenyl]diphenyl- (CA
 THERY MEMO)

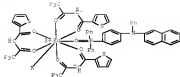


HM	B00142-23-6	CAPLOS
CR	Phosphine oxide, [oxydi-2,3-phenylene]bis[diphenyl- (9CI) (CA INDEX NAME)	

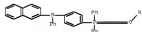


LIL ASHMIN 15 OF 82 CARLUS COPYRIGHT 2010 ACS ON STN
 ACCESSION NUMBER: 2006:299664 CARLUS Full-text
 DOCUMENT NUMBER: 141:255648
 TITLE:
 Manufacture and application of organic rare earth
 coordination compound with adjustable carrier
 INVENTOR(S):
 HUANG, WEI XU, HU
 PATENT ASSIGNEE(S):
 Fudan University, Fudan Univ. Rep. China
 SOURCE:
 Fudan University Shanghai Gongkai Shuxuehui, 28 pp.
 CODEN: CNOX96
 DOCUMENT TYPE:
 Patent
 LANGUAGE:
 Chinese
 FAMILY AC. NUM. COUNT:
 1

PAGE 1-A



PAGE 2-A



17 ~~04/07/2008~~
RL: DEV (Device component use); TEM (Technical or engineered material
use); USES (Uses)
(manufacture and application of organic rare earth coordination compounds)

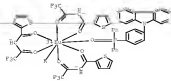
adjustable carrier transmission capacity as electroluminescent

```

MOL 906009-70-9 CAPLOS
CDS Europium, bis[9-[4-(diphenylphosphanyl-o)phenyl]-9H-
carbazole]tris[4,4,4-trifluoro-2-(2-thienyl)-1,3-butanedionato-
 $\kappa^3$ , $\kappa^3$ ']- (9C1) (CA INDEX NAME)

```

Page 1 of 4



PATIENT INFORMATION:

PATENT NO.:	KIND	DATE	APPLICATION NO	DATE
CN 1749352	A	20060322	CN 2005-10027980	20050721
CN 100475931	C	20090408		
PRIORITY APPLN INFO :			CN 2005-10027980	20050721

OTHER SOURCES(S): MAPAT 145:250654

AB The title coordination compds. contain one rare earth metal coordinated by three β -diketone ligands and one to two organic phosphine oxide ligands. The compound can be used in electroluminescence, organic laser and solar cell.

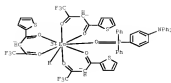
IT Sufoyo G1 41 90C04 5 0 0 0

RE: DRV (Device component use); FPP (Properties); SYN (Synthetic preparation); TEM (Technical or engineered material use); TUFF (

with adjustable carrier transmission capacity as electroluminescent material).

HN 906009-67-4 CAPLUS
CN Europium, bis[4-(diphenylphosphinyl)-N,N-
diphenylbenzenamine]tris[4,6,4-trifluoro-1-(2-thienyl)-1,3-butanedionato-
-N,O'-]-(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-6



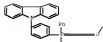
RN 906009-68-5 CAPLUS
CN Europium, bis[8-(4-(diphenylphosphinyl)phenyl)-N-phenyl-2-naphthalenamine]tris[4,4,4-trifluoro-1-(2-thienyl)-1,3-butanedionato- κ^3 O, O', O']- (9CI) (CA INDEX NAME)

II 607651-42-6 607651-43-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(Manufacture and collection of samples have both coordination errors)


with

adjustable carrier transmission capacity as electroluminescent material)

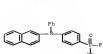
KN 887651-41-4 CAPLUS
 CN Benzenamine, 4-(diphenylphosphinyl)-N,N-diphenyl- (CA INDEX NAME)



PAGE 2-A


O=P(c1ccccc1)c2ccc(Sc3ccccc3)cc2

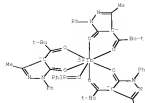
RH 887651-42-5 CASLUS
 CH 2-Naphthalenamine, N-[4-(diphenylphosphinyl)phenyl]-N-phenyl- (CA INDEX NAME)



L11 ANSWER 16 OF 52 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2006:237522 CAPLUS Pull-out
DOCUMENT NUMBER: 144:283050
TITLE: Light-emitting device
INVENTOR(S): Shimizu, Kanji; Murayama, Tetsuo
ASSIGNOR(S): Hitachi Chemical Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.
CODING: JGOCAP
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

discussed. The results show that the best secondary ligand here is TPPD. electrophosphorescent material doped rare-earth complex)

NO 333724-64-4 CAPLUS
CN Terbutyl, tri[4-(12,3-dimethyl-1-(iso- α -[α]-propyl)-2,4-dihydro-5-methyl-1-phenyl-3H-pyrazol-3-onato- α)](triphenylphosphine oxide- α)-
(CA INDEX NAME)



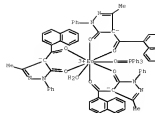
L11 ANSWER 20 OF 52 CAPLUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 0051146634 CAPLUS FULLTEXT
DOCUMENT NUMBER: 14419696
TITLE: Tuning the Triplet Energy Levels of Pyrazolone Ligands to Match the S₀ Level of Europium(III)
AUTHOR(S): Shi, Mei Li, Puyang Yi, Tao Zhang, Dengping Hu, Bucknigh Huang, Chaoxi
CORPORATE SOURCE: Laboratory of Advanced Materials, Fudan University, Shanghai, 200433, Peop. Rep. China
SOURCE: Inorganic Chemistry 170(9), 44(24), 1929-1936
CODEN: INOCAT; ISSN: 0020-1669
JOURNAL: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Three pyrazolone-based ligands, 1-phenyl-3-methyl-4-(1-naphthyl)-5-pyrazolone (H₁), 1-phenyl-3-methyl-4-(6-dimethylaminobenzyl)-5-pyrazolone (H₂), and 1-phenyl-3-methyl-4-(4-cyanobenzyl)-5-pyrazolone (H₃), were synthesized by introducing electron-poor or electron-rich aryl substituents at the 4-position of the pyrazolone ring. Their corresponding Ru complexes [Ru(H₁)(H₂O)₂] and [Ru(H₃)(TPPO)₂] (Ru = 1-3) were characterized by photophysical studies. The characteristic Ru(III) emission of these complexes with at least 9.2 ± 56.3 of fluorescence quantum yield was observed at room temperature. The modification of ligands tunes the triplet energy levels of these pyrazolone-based ligands to match the S₀ energy level of Ru³⁺ properly and improves the energy transfer efficiency from antenna to Ru³⁺, therefore enhancing the Ru(III) emission intensity. The highest energy transfer efficiency and probability of lanthanide emission of [Ru(H₃)(H₂O)₂] are 35.14 and 2.64, resp., which opens up broad prospects for improving luminescence efficiency of the Ru(III) complex. The photophysical and electrochemical properties of [Ru(H₃)(TPPO)₂] (Ru2) were also studied.
PUBNO: 170912
RI: PPD (Preparation, unclassified); PPD (Properties); RCT (Reactant);

17

PREP (Preparation); RACT (Reactant or reagent)
(comparison with; tuning the triplet energy levels of pyrazolone ligands to match the S₀ level of europium(III))
RI: 175500-52-4 CAPLUS
CN Gadolinium, tri(nitrate- α)]bis(triphenylphosphine oxide- α)-
(CA INDEX NAME)

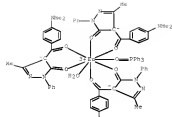


IT 847325-74-3 CAPLUS
RI: PPD (Preparation, unclassified); PPD (Properties); RCT (Reactant); PPD (Preparation); RACT (Reactant or reagent)
(tuning the triplet energy levels of pyrazolone ligands to match the S₀ level of europium(III))
RI: 872505-13-2 CAPLUS
CN Europium, aqua[1,2,4-dihydro-5-methyl-4-(1-naphthyl)carbonyl- α]-3-phenyl-3H-pyrazol-3-onato- α)](triphenylphosphine oxide- α)-, (TPB-6-313*43*122*1)- (CA INDEX NAME)



RI: 872505-13-2 CAPLUS
CN Europium, aqua[1,2,4-dihydro-5-methyl-4-(1-naphthyl)carbonyl- α]-3-phenyl-3H-pyrazol-3-onato- α)](triphenylphosphine oxide- α)-, (TPB-6-313*43*122*1)- (CA INDEX NAME)

PAGE 1-A

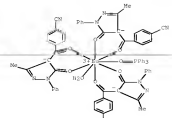


PAGE 2-A

1442

RI: 872505-74-3 CAPLUS
CN Europium, aqua[1,2,4-dihydro-5-methyl-4-(1-naphthyl)carbonyl- α]-3-phenyl-3H-pyrazol-3-onato- α)](triphenylphosphine oxide- α)-, (TPB-6-313*43*122*1)- (CA INDEX NAME)

PAGE 1-A



GB CITING REF COUNT: 50 THERE ARE 33 CAPLUS RECORDS THAT CITE THIS RECORD (56 CITINGS)
REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 21 OF 52 CAPLUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 0051146634 CAPLUS FULLTEXT
DOCUMENT NUMBER: 143131209
TITLE: Light-emitting diode substance containing phosphor complex and polysiloxane and a light-emitting device using it
INVENTOR(S): Sato, Shirohiko; Sato, Shirohiko; Sato, Shirohiko
PATENT ARIERNO(S): Niteki Chemical Co., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JCOOAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO	DATE
JP 2005255912	A	20050922	JP 2004-71404	20040312
PRIORITY REF. INFO:			JP 2004-71404	20040312

The claimed substance contains a phosphor complex and a polysiloxane, and at least part of the polysiloxane has a cage structure. The light-emitting device has a light-emitting part for irradiating UV (350-415 nm) to visible light to a 2nd light-emitting part which generates visible light having wavelength longer than the irradiated light, where the 2nd light-emitting part contains the claimed substance as a wavelength conversion material. Lighting device and display device using the light-emitting device are also claimed. The claimed substance has high luminance intensity, color rendition, and wide color reproduction range.

IT 1212-30-6
RI: DEV (Device component use); IND (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USE (Use)
(light-emitting diode substance containing phosphor complex and cage polysiloxane for high luminance intensity and color rendition)
RI: 1212-30-6 CAPLUS

RI: 1212-30-6 CAPLUS
CN Europium, tri[4,4,4-trifluoro-1-(2-thienyl)-1,3-butadienolato- α]]bis(triphenylphosphine oxide- α)- (CA INDEX NAME)

b7c

PAGE 2-A



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TT 741-28-6, Triphenylphosphine oxide
RE: RCT (Reactant); RACT (Reactant or reagent)
    (red emissive organic phosphor with broad excitation band based on
    Lanthanide complexes with  $\beta$ -diketone and phosphine oxide ligands
    prepared using)
RN 791-28-6 CASREG
CN Phosphine oxide, triphenyl- (CA INDEX NAME)

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111	ANNNNN	23	08	08	CAPLUS	COPYRIGHT	2010	ACS	on	STN
	ACCESSION NUMBER:				20051895164	CAPLUS		<u>Full-text</u>		
	DOCUMENT NUMBER:				143727552					
	TITLE:				Red emission organic phosphor with good excitation band based on lanthanide complexes with B-fluorates and organic phosphine oxide ligands Zhang, Xinyu; Zeng, Xinting Agency for Science, Technology and Research, Singapore U.S. Pat. Appl. Publ., 12 pp (CODEN) USKKKO					
	INVENTOR(S):				Zhang, Xinyu; Zeng, Xinting					
	PATENT ASSIGNEE(S):				Agency for Science, Technology and Research, Singapore					
	SOURCE:				U.S. Pat. Appl. Publ., 12 pp (CODEN) USKKKO					
	DOCUMENT TYPE:				Patent					
	LANGUAGE:				English					
	FAMILY ACC. NUM. COUNT:				1					



ALL AMERICAN 23 OF 82
ACCESSION NUMBER: 2005/091559 CASRN: 7041-64-6
DOCUMENT NUMBER: 1431434398
TITLE: Efficient synthetic route to enhydrous monomeric
tris-(8-quinolineolato)lanthanum complexes for organic
light-emitting devices
AUTHOR(S): Kerkova, Marina A.; Kuznetz, Yuri A.; Fukan, Georgy
K.; Kverghushkin, Anatoly S.; Kabanov, Alexei S.;
Kobayashiro, Andrey G.; G. Rombar, Nikolai M.
CORPORATE SOURCE: G.A. Razuvayev Institute of Organometallic Chemistry of
RAS, Mitsky Boulevard, 603950, Russia
SOURCE: Inorganic Chimica Acta (1998) 238(23),
3625-3632
COCOA (XREF): ISBN: 0020-1643
PUBLISHER: Elsevier, B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE: CASREACT 1431434398

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050194885	A1	20050908	US 2005-49274	20050202 <-
SG 144706	A1	20080828	SG 2004-369	20040204 <-
			SG 2004-369	A 20040204

PRIORITY AFFILI. INFO. :
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LUS DISPLAY FORMAT
OTHER SOURCE(S) : MGPAT 145:275252
AB Red-emitting phosphors of the general formula $\text{Ln}(\text{A})_{3-x}(\text{B})_{2x-2}$ are synthesized

AB Red-emitting phosphors of the general formula $\text{Ln}[\text{Al}(\text{3-x})\text{B}(\text{2x})\text{O}_4]$ are synthesized and characterized, where Ln is a lanthanide series element, A is a β -diketone and B is an organic phosphine oxide R₃PO, in which R = alkyl, alkylphenyl, aryl, Ph and their derive; and where $0 \leq x \leq 0.5$ and 0.4 $\leq x \leq 1$. The phosphors are prepared in a single step process where a lanthanide ion solution is added to a β -diketone and organic phosphine oxide mixture. Light-emission devices employing the phosphors are also discussed.

17 7N)-N-Cy, complex with europium and trimethylfluoroacetone
 EL: FEF (Physical, engineering or chemical process); FPF (Properties); PTF
 (Physical process); SPN (Synthetic preparation); TEM (Technical or
 engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
 (red emission organic phosphor with broad excitation band based on
 lanthanide complexes with β -diketone and phosphine oxide ligands)
 200 200-220 C. castable

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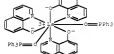
FOI 791-28-6 CAPLUS
CD From: hinc oxide, trihenyl- CA INDEX NAME

```

A new lanthanide 8-quinolinecarboxylate type structure was found for lanthanum 2-methyl-8-quinolinecarboxylate (Lmq) and cerium 2-methyl-8-quinolinecarboxylate (Cmq) and aqueous ammonia in methanol. The mol of 1 contains three La or cerium coordinated by six bridging quinolinecarboxylate ligands, two terminal 8-quinolinecarboxylate ligands, one terminal 11-coordinated 8-quinolinecarboxylate ligand, and one terminal 8-quinolinecarboxylate ligand. The results of the complex suggest that it is bearing a -1 charge balanced by a proton, which was confirmed by electrophoretic mobility measurements. The synthesis of Lmq and Cmq and in pyridine solution is discussed. Syntheses of water- and acid-resistant mononuclear lanthanum quinolinecarboxylate $\text{La}(\text{Cmq})_3$ [12] and $\text{La}(\text{Cmq})_3 \cdot 4\text{H}_2\text{O}$ [13], and cerium quinolinecarboxylate $\text{Ce}(\text{Cmq})_3$ [14] and cerium quinolinecarboxylate, py = pyridine by the reaction of appropriate acids complexes $\text{Ln}(\text{DMSO})_3$ [15] with 3 equiv of 2-methyl-8-quinolinecarboxylic acid or 8-quinolinecarboxylic acid in pyridine solution were reported. The complex $\text{La}(\text{Cmq})_3(\text{DMSO})_3$ [12] was prepared by treatment of 4 with triethylphosphine oxide.

In pyridine solution, Lanthanum complex **2** revealed a photoluminescence intensity approx. 3-4 103 times higher than that of the compound **1** prepared by the traditional way in water-alc medium. These data give a ground to consider the Lq3(py)2 complexes as promising material for design of signal-emitting devices.

17	Ca ₂ F ₂ (OH) ₂ ·2H ₂ O
	RL: FRP (Properties); SPN (Synthetic preparation); FRFP (Preparation) (preparation and luminescence of rare earth quinolinolate complexes for potential use in organic light-emitting devices)
FR	868363-21-7 CAPLUS
CS	Lanthanum, tris(8-quinolinolato-K1, O2)bis(triphenylphosphine oxide-KO)- (CA INDEX NAME)



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17  791-28-6, Triphenylphosphine oxide
    RL: RCT (Reactant); RACT (Reactant or reagent)
        (reactant for preparation of lanthanum quinolinolato triphenylphosphine
        oxide complex)
R#  791-28-6 CARLOS
CS  Phosphine oxide, triphenyl- (CA INDEX NAME)

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001  191-20-6  CHELUB
002  Phosphine oxide, triphenyl-  (CA INDEX NAME)

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FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

[illegible]

JP 2005252290	A	20050915	JP 2005-29595	20050304	<--
EP 1717290	A1	20061102	EP 2005-710144	20050304	<--
Rs DE					
CN 1934214	A	20070321	CN 2005-80009259	20050304	<--
US 20070132366	A1	20070614	US 2007-588292	20070301	
PRIORITY APPLN. INFO.:			JP 2004-30173	A	20040206
			WO 2005-79292	M	20050304

ABSTRACT
THE INVENTION RELATES TO A LIGHT-EMITTING DEVICE (LED) HAVING A HIGH, STABLE
EMISSIVE INTENSITY. THE LED IS A PHOSPHOR-EXCITED SEMICONDUCTOR DEVICE IN WHICH AN LED
OR CD HAVING AN EMISION PEAK OF 380 nm-420 nm IS USED AS THE EXCITING LIGHT
SOURCE OF A LIGHT-EMITTING DEVICE. THE LIGHT EMISION INTENSITY OF A RED
PHOSPHOR DOES NOT CHANGE SIGNIFICANTLY WHEN EXCITED BY LIGHT OF 380 nm-420 nm
BALANCE WHEN MIXED WITH BLUE AND GREEN PHOSPHORS IS KEPT SATISFACTORILY
DESPITE SOME DEVIATION IN ITS EMISION WAVELENGTH. THE LIGHT-EMITTING DEVICE IS
CHARACTERIZED BY EXCITING A PHOSPHOR HAVING BLUE AS AN EMISION CENTER
WITH AN EMISION WAVELENGTH OF 380 nm-420 nm. THE PHOSPHOR HAS AN EMISION
WAVELENGTH OF 600 nm-650 nm IN AN EXCITATION SPECTRUM, OF AT LEAST 65% OF A MAXIMUM EMISION
INTENSITY, AND AN EMISION EFFICIENCY AT 600 nm OF AT LEAST 20%, AND A
SEMI-CONDUCTOR LIGHT-EMITTING ELEMENT THAT EMITS LIGHT IN A NEAR-UV RAY THROUGH
VISIBLE LIGHT REGION

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IT 12121-29-00 616751000000 20101212-00
RN: PPS (Properties); SPH (Synthetic preparation); PREP (Preparation);
  (Light-emitting device and lighting device using
  it, image display unit)
KN 12121-29-00 C60H08
CN European, tri[4,4,6-trifluoro-1-(2-thienyl)-1,3-butenedi-
w01,w03]bis(triphenylphosphine oxide-w0)- (CA INDEX
NAME)

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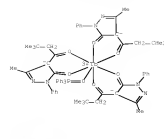
L11 ANSWER 24 OF 82 CAPLUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 2005:823994 CAPLUS Full text
DOCUMENT NUMBER: 143:238350
TITLE: Electronics design and modeling

FILE:	FILE: 0001-002 device and lighting device using it, image display unit
INVENTOR(S):	Yabe, Akiko; Murayama, Tetsuo
PATENT ASSIGNEE(S):	Mitsubishi Chemical Corporation, Japan
SOURCE:	PCI Int. Appl., 46 pp. Soc. Chem. Pat. No. 2
DOCUMENT TYPE:	Patent
LANGUAGE:	Japanese

```

RN      756500-50-2  CAPLOS
CN      Terbium, tris[4-(3,3-dimethyl-1-(oxo- $\kappa$ O)butyl)-2,4-dihydro-5-methyl-
        2-phenyl-3H-pyrazol-3-onato- $\kappa$ O3][triphenylphosphine
        oxide- $\kappa$ O]-, (PB-7-13''-22*3*2'3)- (CA INDEX NAME)

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II 7/32/01-7/3/01
 RI: RCT (Reactant); RACT (Reactant or reagent);
 RI: Tetrahedral compound (electronium material and device)
 RI: 7/32/01-7/3/01 CAPLUS
 RI: Phosphine oxide, triphenyl- (CA INDEX NAME)



L11 NUMBER 27 OF 82 CAPLUS COPYRIGHT 2010 ACS ON STM
 ACCESSION NUMBER: 20051455412 CAPLUS Full Text
 DOCUMENT NUMBER: 14413770
 TITLE:
 Heteroleptic complexes of terbium(III)
 phenylanthracenolate (Tb(PhA)) with triphenylphosphine
 oxide (TPO) A Tb(PhA)(TPO)2-based
 electroluminescent device
 AUTHOR(S):
 Kiseeva, E. V.; Mirzov, O. V.; Lapchev, L. S.; Ivanov,
 L. S.; Dzhilovskiy, N. V.; Vayns, S. A.; Wastling, M. J.
 Naikina, N. S.
 CORPORATE SOURCE:
 Rost. Fed. Res. Gos. Univ. in. M. V. Lomonosov,
 Moscow, Russia
 SOURCE:
 Sci. 2004-425
 CODEN: INDOGAY; ISSN: 0048-457X
 PUBLISHED:
 NIST NIST/Interperiodic Publishing
 JOURNAL TYPE:
 Journal
 OTHER SOURCE(S):
 CHEMABSTRACT 14413770
 AB
 Tb(PhA)(TPO)2 was prepared by coordination of TPO with Tb(PhA)3.20H2O. The
 energy level dispersion was as follows: 3TPO > 3PhA > 3Tb(PhA)3.20H2O. Relative
 photoluminescence intensity of heteroleptic complexes varied as follows:
 Tb(PhA)3 (reference > 1), Tb(PhA)3.20H2O (> 0.7), Tb(PhA)(TPO)2 (1.37),
 Tb(PhA)(TPO)2 (1.36), Tb(PhA)(Phen) (> 0.22). An electroluminescent device

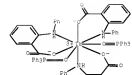
ITO/PEDOT/PSE/PVC/Tb(PhA)3(TPO)2/Al exhibited photo- and electrochromic
 bands corresponding to this only: 504 → 787, 787, 787, and 787 (450, 545,
 589, and 620 nm, resp.), indicating that the central rare earth ion is solely
 responsible for luminescence.
 II 7/32/01-7/3/01 CAPLUS
 RI: RCT (Reactant); RACT (Reactant or reagent);
 RI: Coordination and determination of triplet level; preparation of
 heteroleptic
 complexes of terbium(III) 8-phenylanthracenolate with triphenylphosphine
 oxide and electroluminescent device based thereon
 RI: 7/32/01-7/3/01 CAPLUS
 RI: Phosphine oxide, triphenyl- (CA INDEX NAME)



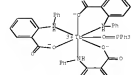
II 7/32/01-7/3/01 CAPLUS
 RI: RCT (Reactant); RACT (Reactant or reagent);
 RI: Preparation for determination of ligand triplet level; preparation of
 heteroleptic
 complexes of terbium(III) 8-phenylanthracenolate with triphenylphosphine
 oxide and electroluminescent device based thereon
 RI: 7/32/01-7/3/01 CAPLUS
 RI: Gadolinium, tris(nitrate-001(triphenylphosphine oxide-001-
 monohydrate, (T-41- (ICI) (CA INDEX NAME)



II 7/32/01-7/3/01 CAPLUS
 RI: RCT (Reactant); RACT (Reactant or reagent);
 RI: Preparation for determination of ligand triplet level; preparation of
 heteroleptic
 complexes of terbium(III) 8-phenylanthracenolate with triphenylphosphine
 oxide and electroluminescent device based thereon
 RI: 7/32/01-7/3/01 CAPLUS
 RI: Terbium, tris[2-(phenylamino-001)benzoate-
 001(triphenylphosphine oxide-001- (CA INDEX NAME)



II 7/32/01-7/3/01 CAPLUS
 RI: RCT (Reactant); RACT (Reactant or reagent);
 RI: Preparation for determination of ligand triplet level; preparation of
 heteroleptic
 complexes of terbium(III) 8-phenylanthracenolate with triphenylphosphine
 oxide and electroluminescent device based thereon
 RI: 7/32/01-7/3/01 CAPLUS
 RI: Terbium, tris[2-(phenylamino-001)benzoate-
 001(triphenylphosphine oxide-001- (CA INDEX NAME)



US 2005/0145541 A1
 (1) CLAIMS

L11 NUMBER 28 OF 82 CAPLUS COPYRIGHT 2010 ACS ON STM
 ACCESSION NUMBER: 20051455412 CAPLUS Full Text
 DOCUMENT NUMBER: 143120736
 TITLE:
 Red/blue mixed ligand-based
 polymer/multilayer rare earth organosilicon light
 converting film prepared at room temperature
 INVENTOR(S):
 Shou, Minglin; Huang, Xiaohua; Liu, Zhenhong; Shen,
 Jian
 PATENT ASSIGNOR(S):
 Foshan Normal University, Peop. Rep. China
 SOURCE:
 Foshan Normal University, Peop. Rep. China
 CODEN: CHINA

DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1431254	A	20040723	CN 2003-112783	20050128
CN 1220721	C	20040928		

PRIORITY APPL. INFO.: CN 2003-112783 20050128

AB The rare earth/organosilicon composite light converting film is prepared from
 polymer 100, clay (its cationic exchange capacity of 10-120 meq (100 g)-1) 0-
 30, rare earth/organosilicon complex light converting agent 0.01-10,
 dispersing medium 100-400, crosslinking agent 0-10, and accelerator 0-10
 part. The polymer is silicone rubber or the polymer or copolymer of acrylic
 acid, methacrylic ester, and/or butylacrylate. The light converting agent is
 a mixture of long-chain organosilicon surfactant with rare earth/alpha-
 phenylanthracenyl-trifluoroacetate complex (rare earth/triphenylphosphine
 oxide complex, or rare earth/diacetic ligand complex), and the rare earth is La or
 Tb. The organosilicon surfactant is Si(CH3)2R2R3R4: R, R3, and/or R4 = Me
 or ethyl; R2 = -CH2- or -CH2CH2- and R4 = higher linear alkyl, CH3-CH2-CH2-CH2-CH2-
 CH2-CH2-CH2-CH2-CH2-CH2-, etc. X = Cl or Br. The process comprises dispersing the
 light converting agent in dispersing agent, mixing with polymer for 1-3 h
 with ultrasonic agent and accelerator, and molding at 20-120°C for 0.2-
 24 h. The process may comprise mixing the light converting agent and clay in
 dispersing medium at 20-200°C for 3-6 h and high-speed agitation, washing,
 drying, grinding to obtain functional organic clay, mixing with polymer for 1-
 3 h then with other raw material, and molding.

II 7/32/01-7/3/01 CAPLUS
 RI: RCT (Reactant); RACT (Reactant or reagent);
 RI: Preparation for determination of ligand triplet level; preparation of
 heteroleptic
 complexes of terbium(III) 8-phenylanthracenolate with triphenylphosphine
 oxide and electroluminescent device based thereon
 RI: 7/32/01-7/3/01 CAPLUS
 RI: Terbium, tris[2-(phenylamino-001)benzoate-
 001(triphenylphosphine oxide-001- (CA INDEX NAME)



L11 NUMBER 29 OF 82 CAPLUS COPYRIGHT 2010 ACS ON STM
 ACCESSION NUMBER: 20051395412 CAPLUS Full Text
 DOCUMENT NUMBER: 143120736
 TITLE:
 Organic semiconductor incorporating triplet emitters
 and their uses and electronic device employing them
 INVENTOR(S):
 Shou, Minglin; Huang, Xiaohua; Liu, Zhenhong; Shen,
 Jian
 PATENT ASSIGNOR(S):
 Foshan Normal University, Peop. Rep. China
 SOURCE:
 Foshan Normal University, Peop. Rep. China
 CODEN: CHINA

LANGUAGE : German
FAMILY ACC NUM COUNT : 1
PATENT INFORMATION :

PATENT NO.	KIND	DATA	APPLICATION NO.	DATA
WO 2005040502	A1	20050506	DE 2005-0911898	20051021 <-
IN 16, 16A, 16B, 16C, 16D, 16E, 16F, 16G, 16H, 16I, 16J, 16K, 16L, 16M, 16N, 16O, 16P, 16Q, 16R, 16S, 16T, 16U, 16V, 16W, 16X, 16Y, 16Z, 16AA, 16AB, 16AC, 16AD, 16AE, 16AF, 16AG, 16AH, 16AI, 16AJ, 16AK, 16AL, 16AM, 16AN, 16AO, 16AP, 16AQ, 16AR, 16AS, 16AT, 16AU, 16AV, 16AW, 16AX, 16AY, 16AZ, 16BA, 16BB, 16BC, 16BD, 16BE, 16BF, 16BG, 16BH, 16BI, 16BJ, 16BK, 16BL, 16BM, 16BN, 16BO, 16BP, 16BQ, 16BR, 16BS, 16BT, 16BU, 16BV, 16BW, 16BX, 16BY, 16BZ, 16CA, 16CB, 16CC, 16CD, 16CE, 16CF, 16CG, 16CH, 16CI, 16CJ, 16CK, 16CL, 16CM, 16CN, 16CO, 16CP, 16CQ, 16CR, 16CS, 16CT, 16CU, 16CV, 16CW, 16CX, 16CY, 16CZ, 16DA, 16DB, 16DC, 16DD, 16DE, 16DF, 16DG, 16DH, 16DI, 16DJ, 16DK, 16DL, 16DM, 16DN, 16DO, 16DP, 16DQ, 16DR, 16DS, 16DT, 16DU, 16DV, 16DW, 16DX, 16DY, 16DZ, 16EA, 16EB, 16EC, 16ED, 16EE, 16EF, 16EG, 16EH, 16EI, 16EJ, 16EK, 16EL, 16EM, 16EN, 16EO, 16EP, 16EQ, 16ER, 16ES, 16ET, 16EU, 16EV, 16EW, 16EX, 16EY, 16EZ, 16FA, 16FB, 16FC, 16FD, 16FE, 16FF, 16FG, 16FH, 16FI, 16FJ, 16FK, 16FL, 16FM, 16FN, 16FO, 16FP, 16FQ, 16FR, 16FS, 16FT, 16FU, 16FV, 16FW, 16FX, 16FY, 16FZ, 16GA, 16GB, 16GC, 16GD, 16GE, 16GF, 16GG, 16GH, 16GI, 16GJ, 16GK, 16GL, 16GM, 16GN, 16GO, 16GP, 16GQ, 16GR, 16GS, 16GT, 16GU, 16GV, 16GW, 16GX, 16GY, 16GZ, 16HA, 16HB, 16HC, 16HD, 16HE, 16HF, 16HG, 16HH, 16HI, 16HJ, 16HK, 16HL, 16HM, 16HN, 16HO, 16HP, 16HQ, 16HR, 16HS, 16HT, 16HU, 16HV, 16HW, 16HX, 16HY, 16HZ, 16IA, 16IB, 16IC, 16ID, 16IE, 16IF, 16IG, 16IH, 16II, 16IJ, 16IK, 16IL, 16IM, 16IN, 16IO, 16IP, 16IQ, 16IR, 16IS, 16IT, 16IU, 16IV, 16IW, 16IX, 16IY, 16IZ, 16JA, 16JB, 16JC, 16JD, 16JE, 16JF, 16JG, 16JH, 16JI, 16JJ, 16JK, 16JL, 16JM, 16JN, 16JO, 16JP, 16JQ, 16JR, 16JS, 16JT, 16JU, 16JV, 16JW, 16JX, 16JY, 16JZ, 16KA, 16KB, 16KC, 16KD, 16KE, 16KF, 16KG, 16KH, 16KI, 16KJ, 16KK, 16KL, 16KM, 16KN, 16KO, 16KP, 16KQ, 16KR, 16KS, 16KT, 16KU, 16KV, 16KW, 16KX, 16KY, 16KZ, 16LA, 16LB, 16LC, 16LD, 16LE, 16LF, 16LG, 16LH, 16LI, 16LJ, 16LK, 16LL, 16LM, 16LN, 16LO, 16LP, 16LQ, 16LR, 16LS, 16LT, 16LU, 16LV, 16LW, 16LX, 16LY, 16LZ, 16MA, 16MB, 16MC, 16MD, 16ME, 16MF, 16MG, 16MH, 16MI, 16MJ, 16MK, 16ML, 16MN, 16MO, 16MP, 16MQ, 16MR, 16MS, 16MT, 16MU, 16MV, 16MW, 16MX, 16MY, 16MZ, 16NA, 16NB, 16NC, 16ND, 16NE, 16NF, 16NG, 16NH, 16NI, 16NJ, 16NK, 16NL, 16NM, 16NO, 16NP, 16NQ, 16NR, 16NS, 16NT, 16NU, 16NV, 16NW, 16NX, 16NY, 16NZ, 16OA, 16OB, 16OC, 16OD, 16OE, 16OF, 16OG, 16OH, 16OI, 16OJ, 16OK, 16OL, 16OM, 16ON, 16OO, 16OP, 16OQ, 16OR, 16OS, 16OT, 16OU, 16OV, 16OW, 16OX, 16OY, 16OZ, 16PA, 16PB, 16PC, 16PD, 16PE, 16PF, 16PG, 16PH, 16PI, 16PJ, 16PK, 16PL, 16PM, 16PN, 16PO, 16PP, 16PQ, 16PR, 16PS, 16PT, 16PU, 16PV, 16PW, 16PX, 16PY, 16PZ, 16QA, 16QB, 16QC, 16QD, 16QE, 16QF, 16QG, 16QH, 16QI, 16QJ, 16QK, 16QL, 16QM, 16QN, 16QO, 16QP, 16QQ, 16QR, 16QS, 16QT, 16QU, 16QV, 16QW, 16QX, 16QY, 16QZ, 16RA, 16RB, 16RC, 16RD, 16RE, 16RF, 16RG, 16RH, 16RI, 16RJ, 16RK, 16RL, 16RM, 16RN, 16RO, 16RP, 16RQ, 16RR, 16RS, 16RT, 16RU, 16RV, 16RW, 16RX, 16RY, 16RZ, 16SA, 16SB, 16SC, 16SD, 16SE, 16SF, 16SG, 16SH, 16SI, 16SJ, 16SK, 16SL, 16SM, 16SN, 16SO, 16SP, 16SQ, 16SR, 16SS, 16ST, 16SU, 16SV, 16SW, 16SX, 16SY, 16SZ, 16TA, 16TB, 16TC, 16TD, 16TE, 16TF, 16TG, 16TH, 16TI, 16TJ, 16TK, 16TL, 16TM, 16TN, 16TO, 16TP, 16TQ, 16TR, 16TS, 16TT, 16TU, 16TV, 16TW, 16TX, 16TY, 16TZ, 16UA, 16UB, 16UC, 16UD, 16UE, 16UF, 16UG, 16UH, 16UI, 16UJ, 16UK, 16UL, 16UM, 16UN, 16UO, 16UP, 16UQ, 16UR, 16US, 16UT, 16UU, 16UV, 16UW, 16UX, 16UY, 16UZ, 16VA, 16VB, 16VC, 16VD, 16VE, 16VF, 16VG, 16VH, 16VI, 16VJ, 16VK, 16VL, 16VM, 16VN, 16VO, 16VP, 16VQ, 16VR, 16VS, 16VT, 16VU, 16VV, 16VW, 16VX, 16VY, 16VZ, 16WA, 16WB, 16WC, 16WD, 16WE, 16WF, 16WG, 16WH, 16WI, 16WJ, 16WK, 16WL, 16WM, 16WN, 16WO, 16WP, 16WQ, 16WR, 16WS, 16WT, 16WU, 16WV, 16WW, 16WX, 16WY, 16WZ, 16XA, 16XB, 16XC, 16XD, 16XE, 16XF, 16XG, 16XH, 16XI, 16XJ, 16XK, 16XL, 16XM, 16XN, 16XO, 16XP, 16XQ, 16XR, 16XS, 16XT, 16XU, 16XV, 16XW, 16XX, 16XY, 16XZ, 16YA, 16YB, 16YC, 16YD, 16YE, 16YF, 16YG, 16YH, 16YI, 16YJ, 16YK, 16YL, 16YM, 16YN, 16YO, 16YP, 16YQ, 16YR, 16YS, 16YT, 16YU, 16YV, 16YW, 16YX, 16YY, 16YZ, 16ZA, 16ZB, 16ZC, 16ZD, 16ZE, 16ZF, 16ZG, 16ZH, 16ZI, 16ZJ, 16ZK, 16ZL, 16ZM, 16ZN, 16ZO, 16ZP, 16ZQ, 16ZR, 16ZS, 16ZT, 16ZU, 16ZV, 16ZW, 16ZX, 16ZY, 16ZZ				

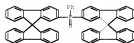
PROSPERITY OFFICE, INFO 1

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LEADS DISPLAY FORMAT

AB Organic semiconductor are described which comprise a polymer, a structural unit including a double bond, and a triplet emitter (each certain restriction). Electronic devices employing the materials in active layers are also described. The use of the materials in organic light-emitting diodes, organic lasers, and organic solar cells, and for nonlinear optical applications, is also described.

IT 074426-1-1
FI: DEV (device component use); MSA (modifier or additive use); USES (uses)
(organic semiconductor incorporating triplet emitters and their uses and electronic devices employing them)

CR 924426-21-9 CAPLOS
CR Phosphine oxide, phenylbis(9,9'-spirobi[9H-fluorene]-2-yl)- ICA INDEX NAME



IT 071102-12-0 071102-12-0 071102-12-0

CR 4

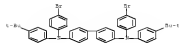
CR 93069-12-4
CR C18 H13 Bz2 O P



CR 951102-14-2 CAPLOS
CR [1,1'-biphenyl]-4,4'-diamine, N,N'-bis(4-(4-bromophenyl)phenyl)phosphine oxide, 2,2',7,7'-tetrakis(2-methylbutoxy)-9,9'-spirobi[9H-fluorene] and 2,2'-(1,3',6',7'-tetrakis(2-methylbutoxy)-9,9'-spirobi[9H-fluorene]-2,7'-diyl)bis(1,3,2-dioxasolane) (DCI) ICA INDEX NAME

CR 1

CR 463944-36-7
CR C44 H42 Bz2 B2



CR 2

CR 396123-43-6
CR C49 H62 Bz2 OB

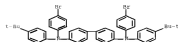


FI: DEV (device component use); POF (polymer in formulation); USES (uses)
(organic semiconductor incorporating triplet emitters and their uses and electronic devices employing them)

CR 951102-52-0 CAPLOS
CR [1,1'-biphenyl]-4,4'-diamine, N,N'-bis(4-(4-bromophenyl)-9,9'-bis(4-(1,1'-dimethylphenyl)phenyl)-2,7'-dibromo-9-(2,5-dimethylphenyl)-9H-fluorene)-2,7'-diyl)bis(1,3,2-dioxasolane)-9,9'-spirobi[9H-fluorene]-2,7'-diyl)bis(1,3,2-dioxasolane) (DCI) ICA INDEX NAME

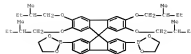
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CR 463944-36-7
CR C44 H42 Bz2 B2



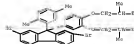
CR 2

CR 396123-43-6
CR C49 H62 Bz2 OB



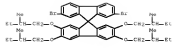
CR 3

CR 396123-39-0
CR C37 H40 Bz2 OB



CR 3

CR 390039-23-1
CR C48 H54 Bz2 OB



CR 4

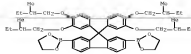
CR 93069-52-4
CR C18 H13 Bz2 O P



CR 951102-59-6 CAPLOS
CR Phosphine oxide, bis(4-(4-bromophenyl)phenyl)-, polymer with 2,2'-(1,3',6',7'-tetrakis(2-methylbutoxy)-9,9'-spirobi[9H-fluorene]-2,7'-diyl)bis(1,3,2-dioxasolane) (DCI) ICA INDEX NAME

CR 1

CR 396123-43-6
CR C49 H62 Bz2 OB



CR 2

CR 93069-52-4
CR C18 H13 Bz2 O P



17 11543-XX-01, Bis(4-bromophenyl)phosphine oxide
 RI, ACT (Reaction); SYN (Synthetic preparation); PREP (Preparation); RACT (Reaction, or respect)
 (organic semiconductors incorporating triplet emitters and their uses and electronic devices employing them)
 CR 91569-52-4 CAPLUS
 CS Phosphine oxide, bis(4-bromophenyl)phenyl- (CA INDEX NAME)



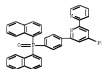
US CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
 REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 NUMBER 30 OF 82 CAPLUS COPYRIGHT 2010 ACS on STM
 ACCESSION NUMBER: 200509425 CAPLUS Fulltext
 DOCUMENT NUMBER: 142136339
 TITLE: Organic electroluminescent device
 INVENTOR(S): Murose, Seichiro; Tanihara, Takehiko; Kitanaka, Daikei
 PATENT ASSIGNER(S): Sony Industries, Inc., Japan
 SOURCE: Jpn Kokai Tokkyo Koho, 16 pp.
 CODE: J02K01F
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC NUM COUNT: 1
 PATENT INFORMATION:

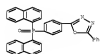
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 200509425	A	20050407	JP 2004-233139	20040810 <-
PRIORITY REFUS. INFO:			JP 2003-207260	20030512

AB The invention relates to an organic electroluminescent device comprising an electron transporting layer composed of a 1st electron transporting layer in contact with an electroluminescent layer and a 2nd electron transporting layer in contact with a cathode, wherein the heterocyclic compound containing an electron accepting nitrogen atom is included in the 2nd electron transporting layer for enhancing the quantum efficiency.

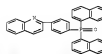
17 127455-05-6 CAPLUS
 CS 2,2'-Bipyridine, 6-[4-(di-1-naphthalenyl)phosphinyl]phenyl]-5-phenyl- (CA INDEX NAME)



RU 72455-06-4 CAPLUS
 CS 2,2'-Bipyridine, 6-[4-(di-1-naphthalenyl)phosphinyl]phenyl]-5-phenyl- (CA INDEX NAME)



RU 849091-56-1 CAPLUS
 CS Quinoline, 2-[4-(di-1-naphthalenyl)phosphinyl]phenyl]- (CA INDEX NAME)

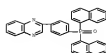


RU 849091-56-1 CAPLUS
 CS Quinoline, 2-[4-(di-1-naphthalenyl)phosphinyl]phenyl]-4-(1-naphthalenyl)-5-phenyl- (CA INDEX NAME)

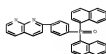
RU: DEV (Device component use); USES (Uses)
 (electron transporting layer; organic electroluminescent device)
 RU 721959-53-3 CAPLUS
 CS Phosphine oxide, phenylidene-1-pyrenyl- (CA INDEX NAME)



RU 721959-56-6 CAPLUS
 CS Quinoxaline, 2-[4-(di-1-naphthalenyl)phosphinyl]phenyl]- (CA INDEX NAME)



RU 72455-04-4 CAPLUS
 CS 1,8-Naphthyridine, 2-[4-(di-1-naphthalenyl)phosphinyl]phenyl]- (CA INDEX NAME)

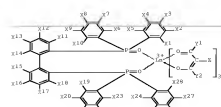


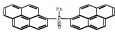
RU 72455-05-6 CAPLUS
 CS 2,2'-Bipyridine, 6-[4-(di-1-naphthalenyl)phosphinyl]phenyl]-4-phenyl- (CA INDEX NAME)

L11 NUMBER 31 OF 82 CAPLUS COPYRIGHT 2010 ACS on STM
 ACCESSION NUMBER: 200527500 CAPLUS Fulltext
 DOCUMENT NUMBER: 142136339
 TITLE: Rare earth bis(diphenylphosphinyl)biphenyl(emitting)acacate phosphors showing high luminescence intensity, and lasers, optical materials, and emitting devices using them
 INVENTOR(S): Hasegawa, Eiyo; Taniguchi, Shozo; Noda, Taji
 PATENT ASSIGNER(S): Kansei Technology Licensing Organization Co., Ltd., Japan
 SOURCE: Jpn Kokai Tokkyo Koho, 11 pp.
 CODE: J02K01F
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC NUM COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 200608299	A	20060331	JP 2003-315948	20030908 <-
JP 4378139	B2	20091202		20030908

PRIORITY REFUS. INFO: MOSPAT 1421363391 JP 2003-315948
 OTHER SOURCE(S): 91

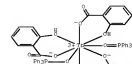
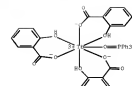




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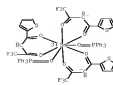
1Y 72193-93-30, cesium complexes
PLI DEV (Device component use); FNU (Formation, unclassified); FORM
(Formation, nonpreparative); USES (Uses)
Light-emitting diodes with Ca-doped
phenylidipyrrenylphosphine oxide layer as electron-injection layer}
CN 72193-93-3 CAPSULE
RN Phosphine oxide, phenylidipyrrenyl- (CA INDEX NAME)

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ALL ANSWER 34 OF 35 CAPLUS COPYRIGHT 2010 ACS on STD
 ACCESSION NUMBER: 2005143613 CAPLUS Fileset
 DOCUMENT NUMBER: 1412143613
 TITLE: Mixtures of organic emissive semiconductors and matrix
 compounds: synthesis, properties and applications
 INVESTOR (S): Becker, Reinhold; Gerhard, Anja; Stommel, Philipp;
 Vauthier, Horst
 PATENT ASSIGNEE(S): Commission of the European Communities
 SOURCE: ECT Int. Appl., 41 pp.
 DOCUMENT FILE#2
 DOCUMENT TYPE: Database
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

INDEX NAME



08. CITING REF COUNT:	24	THERE ARE 24 CAPLOS RECORDS THAT CITE THIS RECORD (24 CITINGS)
REFERENCE COUNT:	17	THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 40 OF 82 CAPLUS COPYRIGHT 2010 ACS on ETR
ACCESSION NUMBER: 2004:569270 CAPLUS Full-text
DOCUMENT NUMBER: 141:131039
TITLE: Electroluminescent device

INVENTOR(S): Murase, Seiichiro; Tomimaga, Takeshi; Kitanawa,
Daizuke
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 53 pp.
CODEN: JCOGAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY APP. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO	DATE
JP 2004200162	A	20040715	JP 2003-407119	20031205
PRIORITY ATTN. INFO.:			JP 2002-353461	20021205
OTHER SOURCE(S):	MAPPAT	161:131039		

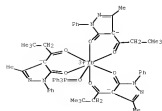


AB The invention relates to an electroluminescent device, suited for use in making a white light-emitting device, comprising an electroluminescent layer containing a pyromethene compound or its metal complex, represented by I [R1: Y = H, alkyl, cycloalkyl, etc.; X = N and C, when X = N, then R2 = null], and

[illegible]

AB: PNP (Preparation, unclassified); PRP (Properties); PREP (Preparation)
(effect of different neutral ligands on luminescence and electrochromic properties of ternary terbium complexes)

CN Terbutium, tris[4-(3,3-dimethyl-1-(oxo- κ O)butyl)=2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onato- κ O3]triphenylphosphine oxide- κ O)-, (PB-7-13''-22'3'2'3')- (CA INDEX NAME)



II 192-28-6. Triphenylphosphine oxide 192-28-6

RL: PSP (Properties)
(effect of different neutral ligands on luminescence and
photochemical properties of ternary barium complexes)

RH T91-28-6 CAPLOS

CN Phosphine oxide, triphenyl- (CA INDEX NAME)

AB Three terbium complexes Tb(tba-PMF)3(TFPO) (A), Tb(tba-PMF)3(H2O) (B), and Tb(tba-PMF)3(Phen) (C) (where tba-PMF, TFPO, and Phen stand for β -diketone 1-phenyl-3-methyl-6-(tert-butylacetyl)-5-pyrazolone, tri-*o*-th phosphine oxide, and 1,10-phenanthroline, respectively) were synthesized and characterized.



RR 756500-02-4 CAPLUS

CS Gelsolium, tris(trimethylsilyl)triarylsphosphine oxide-MO1- (CA INDEX NAME)



06 CITING REF COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 NUMBER 42 OF 82 CAPLUS COPYRIGHT 2010 ACS ON STM

ACCESSION NUMBER: 2004121787 CAPLUS [Full-Text](#)

DOCUMENT NUMBER: 41146623

TITLE: Voltage-independent pure red devices based on a

carbazole-functionalized europium complex

AUTHOR(S): Kim, Heo, Sun, Ming Wang, Ka Shi, Zhang, Tong An, Jin,

Liu, Pei, Huang, Chun Rul

CORPORATE SOURCE: State Key Laboratory of Rare Earth Materials Chemistry

and Applications, Department of Chemistry, Peking

University, Beijing, 100871, Peop. Rep. China

SOURCE: Chemical Physics Letters (2004), 389(1-3),

55-57

CODEN: CHPLCY, ISSN: 0009-2614

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Electroluminescent properties of carazole-functionalized complex

tris(dibenzylmethanato)(1-ethyl-2-(N-ethyl-carbazole)-9-ylidene)-4,5-

[1,10-phenanthroline]europium(III) [Eu(DMB)Phenacac] was studied. By using

complex tris(4-phenyl-5-methyl-6-isobutyl-2-pyrazolone)-bis(tri-*n*-butyl phosphine

oxide) Mo (DMPE)/TPPO2 as electron-transport layer, hole and electron

injection was relatively balanced in the emitting layer and a device with the

configuration of ITO/ITO (40 nm)/Eu(DMB)Phenacac (40 nm)/Eu(DMB)TPPO2

(20 nm)/Alq3 (10 nm)/Mg:Ag emitted voltage-independent characteristic blue light

with the luminance of 170 cd/m2, power efficiency 1.68 lm/W.

11 4113525-1

Mo DEV (Device component use); PEP (Physical, engineering or chemical

process); PEP (Preparation); PEP (Physical process); PEP (Synthetic

preparation); PEP (Preparation); PEP (Physical process); PEP (Synthetic

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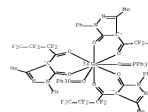
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06 CITING REF COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 NUMBER 43 OF 82 CAPLUS COPYRIGHT 2010 ACS ON STM

ACCESSION NUMBER: 2004121801 CAPLUS [Full-Text](#)

DOCUMENT NUMBER: 41146624

TITLE: New hyperchromed poly(aryleneethynylene)s: synthesis,

chemical stability and optoelectronic

properties

AUTHOR(S): Housheer, Matthias; Lam, Jacky King Tsz; Tong, Rui;

Shen, Fonghua; Tang, Ben Sheng

CORPORATE SOURCE: Department of Chemistry, Hong Kong University of

Science and Technology, Hong Kong, Peop. Rep. China

SOURCE: Polymer Preprints (American Chemical Society, Division

of Polymer Chemistry) (2004), 45(1), 595-596

CODEN: POLYPR, ISSN: 0032-3534

PUBLISHER: American Chemical Society, Division of Polymer

Chemistry

DOCUMENT TYPE: Journal (computer optical disk)

LANGUAGE: English

AB A group of new conjugated hyperchromed poly(aryleneethynylene)s (HPEAs) has

been prepared by oxidative coupling of alkynes using CuCl as catalyst. The

hyperchromed structures of the HPEAs are confirmed by standard spectroscopic

anal. All of the HPEAs exhibit outstanding thermal stability and emitting

strong UV light. Such materials may find an array of high-tech applications.

11 410737-7-16, heptylphosphineoxide-terminated

poly(aryleneethynylene)s

11 410737-7-16, heptylphosphineoxide-terminated

poly(aryleneethynylene)s

11 410737-7-16, heptylphosphineoxide-terminated

poly(aryleneethynylene)s

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poly(aryleneethynylene)s

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poly(aryleneethynylene)s

11 410737-7-16, heptylphosphineoxide-terminated

poly(aryleneethynylene)s

11 410737-7-16, heptylphosphineoxide-terminated

poly(aryleneethynylene)s

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poly(aryleneethynylene)s

11 410737-7-16, heptylphosphineoxide-terminated

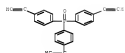
poly(aryleneethynylene)s

11 410737-7-16, heptylphosphineoxide-terminated

poly(aryleneethynylene)s

CS 676456-02-3

CM C2A H15 O P



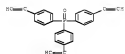
RR 69370-07-5 CAPLUS

CS Phosphine oxide, tris(4-ethynylphenyl)-, homopolymer (PCI) (CA INDEX NAME)

CM 1

CS 676456-02-3

CM C2A H15 O P



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 NUMBER 44 OF 82 CAPLUS COPYRIGHT 2010 ACS ON STM

ACCESSION NUMBER: 2004137999 CAPLUS [Full-Text](#)

DOCUMENT NUMBER: 41145076

TITLE: Electrochromic properties of the mixed-ligand

complex of terbium allylolate with triphenylphosphine

oxide

AUTHOR(S): Kiseeva, Irina; Borisov, Oleg; Mitrov, Slob;

Boiko, Kirill; Lerner, Leonid; Pavlenchikov, Elena;

Vishnovskiy, Alexey; Nuzhova, Natalia

Laboratory of Coordination Chemistry, Department of

Chemistry, Lomonosov Moscow State University, Moscow,

119992, Russia

SOURCE: Synthetic Metals (2004), 141(3), 225-230

CODEN: SYNMAU, ISSN: 0167-5779

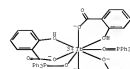
PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

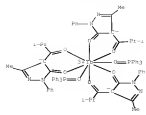
AB A novel mixed-ligand complex Tb(allyl)3TPPO2 was synthesized and

characterized by elemental, IR and thermal analysis. The film-forming



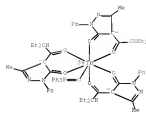
11 410737-7-16

Mo DEV (Device component use); PEP (Physical, engineering or chemical



PAGE 060106-43-E CAPLOS

CN Terbutuz, tris[4-[2-ethyl-1-(oxo-KO)butyl]-2,4-dihydro-5-methyl-2-phenyl-1H-pyrazol-3-oxo-KO3][triphenylphosphane oxide-KO]-, (TFS-1-1-12''3'2'3'2)- (CA INDEX NAME)



OS CITING REF COUNT:	27	THERE ARE 27 CAPLUS RECORDS THAT CITE THIS RECORD (27 CITINGS)
REFERENCE COUNT:	13	THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD

L11 ANSWER 49 OF 82 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2003:159040 CAPLUS Full-text
DOCUMENT NUMBER: 159:159040
TITLE: Photoactive lanthanide complexes with phosphine

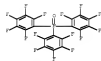
INVENTOR: R. J. BOYNTON/III

electron transport materials are also claimed. Cyclometalated iridium complexes derived from (un)substituted 2-phenylpyridines are preferred.

II 2-Phenyl-2,2',6,6'-tetraphenyl-6H-silole

RL: RCT (Reactant); RACT (Reactant or reagent)
(coordination in luminescent lanthanide complexes)

NO	2729-11-5	CAPLUS	
CS	Phosphine oxide, tris(2,3,4,5,6-pentafluorophenyl)-	(CA INDEX NAME)	



II 551 $\lambda_0 = 0$, Triphenylphosphine oxide

RL: RCT (Reactant); RACT (Reactant or reagent)
(for preparation of luminescent lanthanide β -enolate complexes containing phosphine oxides and analogs)

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#0  791-28-6  CAPLUB
#1  Phosphine oxide, triphenyl-  (CA INDEX NAME)

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17 980427v1-00 5/4/83-12-17

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation and electroluminescent properties as photoactive lanthanide complex for use in electronic devices)

FOI 569642-07-5 CAPLON

phenyl-3H-pyrazol-3-one-NO3]bis(tris(pentafluorophenyl)phosphine oxide-NO)- (9CI) (CA INDEX NAME)

PATENT ASSIGNEE(S): E. I. Du Pont De Nemours and Company, USA
SOURCE: U S Pat. Appl. Publ., 38 pp.
CODEN: USDCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

[illegible]

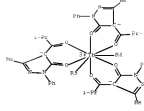
PRIORITY APPLN. INFO.

US 2002-185484 A3 20020627
WO 2002-US21024 W 20020703
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LISTS DISPLAY FORMAT

THESE SOURCE(S): MAPPAT 139:159040

AB The present invention is generally directed to luminescent lanthanide compounds comprising a phenylacetylene-oxadiazole, pyridine-*N*-oxide, and phosphine oxide-pyridine-*N*-oxide ligands, especially with β -enolate co-ligands. It also relates to thin film OLED electronic devices in which the active layer includes the photophysical lanthanide complex. Thus, $\text{Tris}(\text{BTPG})_3\text{[FtpgO]}_2\text{[FmgO]}_4$ (4-isobutyl-1-(3-methyl-1-phenyl-5-pyrazolone), $\text{FtpgO} = \text{tris}(\text{pentafluorophenyl})\text{phosphine oxide}$) was prepared and its electroluminescent properties were measured along with 7 other prepared complexes. The results show that the complexes of FtpgO and FmgO are suitable for use as an active layer, electroluminescent layer comprising the lanthanide complexes of the invention, and at least one electron transport layer. Various hole and

PAGE 4-3.



PAGE 2-3

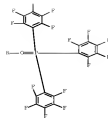
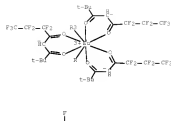


PAGE 2-A



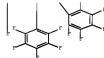
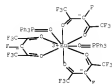


RD 589642-12-2 CAPLUS
CN European, tri(1,1,1,3,3,5,5-heptafluoro-2,3-dimethyl-3,5-oxadiazolono-
WO)bis[tri(pentafluorophenyl)phosphine oxide-WO]-
(PCT) (CA INDEX NAME)



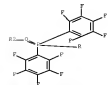
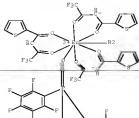
RI: DEV (Device component use), PPD (Properties), SPN (Synthetic
preparation), PPD (Preparation), USES (Uses)
preparation and luminescence as photoactive lanthanide complex for use in
electronic devices)

RD 432076-12-8 CAPLUS
CN European, tri(1,1,1,3,3,5,5-heptafluoro-2,6-pentanedionato-
WO)bis(triphenylphosphine oxide-WO)- (PCT) (CA
INDEX NAME)



RI: DEV (Device component use), SPN (Synthetic preparation), PPD
(Preparation), USES (Uses)
preparation as photoactive lanthanide complex for use in electronic
devices)

RD 589642-16-1 CAPLUS
CN European, tri(4,4,4-trifluoro-1-(2-thienyl)-1,3-butanedionato-
WO)bis[tri(pentafluorophenyl)phosphine oxide-WO]-
(PCT) (CA INDEX NAME)



OS_CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
(3 CITINGS)
REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE DE FORMAT

L11 NUMBER 50 OF 82 CAPLUS COPYRIGHT 2010 ACS on STE
ACCESSION NUMBER: 2003030257 CAPLUS PUBL-NAME
DOCUMENT NUMBER: 139103356
TITLE: Efficient Electroluminescence From a New
Tetraphenyl Complex
AUTHOR(S): Zhai, Hong; Li, Pu; Yang, Shi; Mei; Bian, Zu; Guang, Huang,
Chen, Hu

CN Terbutia, tri[4-[2-ethyl-1-(oxo-KO)butyl]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onato-KO3]triphenylphosphine oxide-KO)-, (TBS-3-12^a,3'12'^b3''12'''- ICA INDEGA, HAMEG)

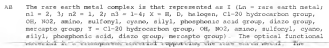
INVENTOR(S): Nanagawa, Sotya; Yanagida, Shozo; Wada, Yuji; Shinada,

17 791-28-6, triphenylphosphine oxide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (for preparation of rare earth metal complex associated with
 organic-inorganic diode or semiconductor laser for electroluminescent
 device)
 NS 791-28-6 CASLUS
 CS Phosphine oxide, triphenyl- (CA INDEX NAME)

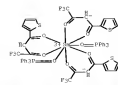
17 47797-92-90
ML IMF (Industrial manufacture); TM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(Rare earth metal complex associated with 2,2,6,6-tetramethyl-3-oxo-1,2-dioxane-5-carboxylic acid or semiconductor laser for electroluminescent device)
200 11376-12-9 CASUS
230 Surrogate, trans(1,1,1,5,5,5-hexafluoro-2,4,6-pentamethylonastatocyclohex-3-en-1-yl)bis(triphenylphosphine oxide-oxo)-,
[C6H8O4F6P2] trans(1,1,1,5,5,5-hexafluoro-2,4,6-pentamethylonastatocyclohex-3-en-1-yl)bis(triphenylphosphine oxide-oxo)-,
[C6H8O4F6P2] trans(1,1,1,5,5,5-hexafluoro-2,4,6-pentamethylonastatocyclohex-3-en-1-yl)bis(triphenylphosphine oxide-oxo)-, [C6H8O4F6P2]



INVENTOR(S): Murane, Seichiro; Tominaga, Tsuyoshi; Kohana, Akira



INVENTOR(S): Murane, Seichiro; Tominaga, Tsuyoshi; Kohana, Akira



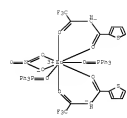
PATENT ASSIGNEE(S): Toney Industries, Inc., Japan
 SOURCE: Eur Pat Appl., 34 pp
 OTHER REFNO: KUR PATENT
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1251151	A1	20021030	EP 2002-252947	20020425 <--
EP 1251151	B1	20020112		
RU 273, BE, CH, DE, ES, FR, GB, GR, HU, IL, IT, JP, KR, NL, NO, PT, SE, SI, LT, LV, PL, PT, RO, RU, SK, TR, UA, UK, US	B	20021111	TW 2002-91107585	20020415 <--
TM 565504	A	20020115	JP 2002-117229	20020419 <--
JP 2003012476	H2	20021021		
JP 4000893	H2	20020901		
US 20020095406	A1	20020501	US 2002-126652	20020422 <--
US200378	H2	20021019		
NO 121173	B1	20020336	NO 2002-2403	20020424 <--
KR 2003061	A1	20020904	KR 2002-12235	20020424 <--
CH 1390541	A	20020115	CH 2002-124069	20020425 <--
AJ 264903	T	20020115	AJ 2002-232947	20020425 <--
CH 1241642	C	20021102	CH 2002-10013206	20020425 <--
KR 1004414	C	200210424		
CH 1241670	A	20020328	CH 2002-10166054	20020425 <--
JP 2002083378	A	20020330	JP 2002-150546	20020524 <--
AJ 401469	H2	20020139		
KR 2002046099	A	20020708	KR 2002-50903	20020530
KR 2002090	B1	20020904		
PROGRIFF AFFIL. INFO. 1				
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			JP 2001-158235	A 20010528
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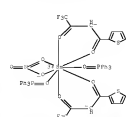
ABSTRACT REPORT FOR US PATENT AVAILABLE IN LATER DISPLAY FORMAT
 OTHER SOURCE(10): MORGAT 137143709
 GI

AR Pyromethane metal complexes are described by the general formula I (R1, R2, and each L is independently selected to alkyl, cycloalkyl, aralkyl, alkyl, cycloalkenyl, alkynyl, hydrazyl, mercapto, alkoxy, alkylthio, aryl ether, aryl thioether, aryl, heterocyclic, halogen, haloalkane, haloalkene, haloalkyne, cyano, aldimine, oxime, carbonyl, ester, oxime, amine, nitrile, allyl, siloxanyl, and fused aromatic and aliphatic rings formed from Ar1 and Ar2 and M is a metal having a valence of n selected from boron, beryllium, magnesium, zinc, cadmium, mercury, thallium, lead, tin, antimony, bismuth, arsenic, selenium, tellurium, and polonium substituted aryl groups with the proviso that any of Ar1-

CH European, [nitrate-ko,wo']nde(4,4,4-trifluoro-1-[2-thienyl]-1,3-butanedionato-ko,wo')bis(triphenylphosphine oxide-wo)- (9C1) (CA INDEX NAME)



KR 122935-63-B CAPUS
 ACCESSION NUMBER: 1229174091 CAPUS Full-Index
 1,3-butanedionato-ko,wo')bis(triphenylphosphine oxide-wo)- (9C1) (CA INDEX NAME)



OR CITING REF COUNT: 6 THERE ARE 6 CAPUS RECORDS THAT CITE THIS RECORD (6 CITINGS)
 REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 NUMBER 55 OF 82 CAPUS COPYRIGHT 2010 ACS ON STM
 DOCUMENT NUMBER: 138150787
 TITLE: Rare-earth organic electroluminescent white light-emitting material

4, together with an adjacent group selected from R1, R2 and the or each group L may form a fused aromatic or aliphatic ring; light-emitting devices comprising 21 of a diheptapropyl(4,4'-pyrrolic derivative and an organic fluorescent material having a fluorescent peak wavelength in the range 510-720 nm, and a light-emitting device component containing 1 are also described (1304, 1305)
 IT R1: DEV (Device component use); USES (Uses) (pyromethane metal complexes and light-emitting device component and the devices)
 RN 471067-50-0 CAPUS
 CH Pyromethane oxide, diphenyl-1-pyrenyl- (CA INDEX NAME)



US CITING REF COUNT: 19 THERE ARE 19 CAPUS RECORDS THAT CITE THIS RECORD (14 CITINGS)
 REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

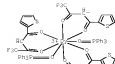
L11 NUMBER 54 OF 82 CAPUS COPYRIGHT 2010 ACS ON STM
 ACCESSION NUMBER: 2002170121 CAPUS Full-Index
 DOCUMENT NUMBER: 138128242
 TITLE: Synthesis, characterization and luminescent properties of a europium (III) complex
 AUTHOR(S): Gu, T.; Wang, T.; Gu, S.; Zou, Y. K.; Wang, G. M.; Shu, X.
 CORPORATE SOURCE: School of Electrical and Electronic Engineering, Division of Microelectronics, Nanyang Technological University, Singapore, 119390, Singapore
 SOURCE: Thin Solid Films (2002) 411/1-3, 70-84
 CORD: 2002AF, ISSN: 0040-6090
 FURNISHER: Elsevier Science B.V.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Rare earth chelates of Sm(III) (complex 1) and Eu(III) (complex 2) with 8-diketonate ligand (2-thienyl)trifluoromethylacetone (HTTA) and OFTH (TFPO) were prepared from their nitrate salts. Single crystal x-ray diffraction, FTIR and thermogravimetric analyses were used in the characterization. Both photoluminescence (PL) and electroluminescence (EL) properties of complex 2 were studied. In both crystals powder and film states, the PL spectra exhibit emission peaks typical of Eu(III) with the most intense at 615 nm. Single layer EL devices based on complex 2 fabricated by evaporation also only weak emissions, while double layer devices with a hole transport layer of N,N'-bis(3-methylphenyl)-N,N'-diphenylbenzidine (TPD) exhibit enhanced intensity indicating better carrier injection balance.
 IT R1: DEV (Device component use); REF (References); USES (Uses) (synthesis, characterization and luminescent properties of a europium (III) complex)
 RN 85096-10-0 CAPUS

INVENTOR(S): Li, Wenjian; Hong, Zheng; Bao, Deyi; Li, Puqiang; Liang, Changjun; Fan, Bi
 PATENT ASSIGNEE(S): Changchun Institute of Optics & Fine Mechanics and Physics, Chinese Academy of Sciences, P.O. Box 912, Changchun, Jilin 130002, China
 SOURCE: Patent
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

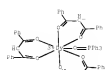
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 1229128	A	20020102	CH 2000-117790	20000420 <--
PRIORITY AFFIL. INFO. 1			CH 2000-117790	20000420
ACCESSION NUMBER: 1229174091 CAPUS Full-Index				
IT R1: DEV (Device component use); USES (Uses) (pyromethane metal complexes and light-emitting device using them)				
RN 471067-50-0 CAPUS				
CH Dipyrromethane, tri(1,3-diphenyl-1,3-propenedionato-ko,wo')bis(triphenylphosphine oxide-wo)- (9C1) (CA INDEX NAME)				



RN 473681-1-3 CAPUS
 CH Dipyrromethane, tri(1,3-diphenyl-1,3-propenedionato-ko,wo')bis(triphenylphosphine oxide-wo)- (9C1) (CA INDEX NAME)

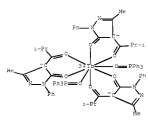


4779C-18-Q CAPUS
 Synthesis, tri(1,3-diphenyl-1,3-propanedionato-
 w(1,3)) (triphenylphosphine oxide-w(1)) (PCT) (CA INDEX NAME)



111 NUMBER 56 OF 82 CAPUS COPYRIGHT 2010 ACS ON STM
 ACCESSION NUMBER: 2007432126 CAPUS Full-text
 DOCUMENT NUMBER: 1374302119
 TITLE: Growth and characterization of GaInSb with europium complex as emitting layer
 INVENTOR(S): Nogueira, R. J. da Silva, C. F. R. de Brito, B. F.,
 Cremona, M.
 CORPORATE SOURCE: Departamento de Física, Pontifícia Universidade
 Católica do Rio de Janeiro, PUC-Rio, Brazil
 SOURCE: Brazilian Journal of Physics (Rev.), 32(2B),
 535-539
 COUNTRY: BRAZIL; ISSN: 0103-9733
 FORUM(S): Sociedade Brasileira de Física
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The growth and the characterization of red emitting triple-layer
 electroluminescent organic devices using vacuum deposited Eu(TTA)₃(TPPO)₂ as
 complex-as-emitter-layer (see abstract) is described. The device
 (5) is characterized by the hole-injection. In this device the hole transport
 layer is obtained using a thin film of 2-(3-methylphenyl)-1,2,3,4-
 tetrahydroquinoline-6-carboxylic acid-h₂, 1,1'- diphenylpicrazone (MPCD), while

process; PEP (Properties); PROC (Process); USES (Uses)
 Blue electroluminescent organic device using vacuum deposited Eu(TTA)₃(TPPO)₂ as
 emitting layer and electron-transporting layer w(1)
 207351-75-5 CAPUS
 Title: Terbutyl, tri(2,4-dihydro-3-methyl-4-[2-methyl-1-(oxo-w(1)propyl)-2-
 phenyl-3H-pyrazol-3-onato-w(3)]bis(triphenylphosphine
 oxide-w(1)) (CA INDEX NAME)



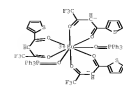
US CITING REF COUNT: 7 THERE ARE 7 CAPUS RECORDS THAT CITE THIS RECORD
 (1 CITING REF)
 REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THIS AS FORMAT

111 NUMBER 58 OF 82 CAPUS COPYRIGHT 2010 ACS ON STM
 ACCESSION NUMBER: 2002118265 CAPUS Full-text
 DOCUMENT NUMBER: 136139272
 TITLE: Method of forming multiple layer structure of
 alternating layers of organic and inorganic materials and
 devices comprising same
 INVENTOR(S): Hwang, Hong-Sung; Wang, Li-Duo
 PATENT ADDRESSEE(S): U.S. Pat. Appl. Publ., 11 pp., Cont.-in-part of U.S.
 Ser. No. 420,192.
 SOURCE: COUNTRY: USA
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC NUM COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20020264297	A1	20020229	US 2001-90814	20011725 <-

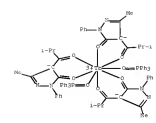
PRIORITY APPLICATION INFO:
 ASSIGNMENT HISTORY FOR US PATENT AVAIL IN LISTS DISPLAY FORMAT
 AB Pinned layer deposition or thermal evaporation is used to deposit organic thin
 films, in particular of materials that are of interest to display
 applications. The films are deposited under vacuum using a hydroquinone derivative
 (Alq)₃ can be deposited without degradation of their luminescent properties.

the tri(2-hydroxyquinoline)aluminum (Alq)₃ is used as electron transport
 layer (EUL)
 111 NUMBER 59 OF 82 CAPUS COPYRIGHT 2010 ACS ON STM
 ACCESSION NUMBER: 2002125765 CAPUS Full-text
 DOCUMENT NUMBER: 13712523
 TITLE: Blue organic electroluminescent devices based on a
 diethylarylene derivative as emitting layer and a
 carboxyl complex as electron-transporting layer
 INVENTOR(S): Huang, Li-Ting; Wang, Chai-Rui
 CORPORATE SOURCE: Peking University, State Key Laboratory of Rare Earth
 Materials Chemistry and Applications, Beijing, 100073,
 Peop. Rep. China
 SOURCE: Journal of Luminescence (Jap.), 97(1), 55-59
 COUNTRY: CHINA; ISSN: 0022-2313
 PUBLISHER: Elsevier Science B.V.
 LANGUAGE: English
 AB With a blue diethylarylene derivative, 4,4'-bis(2,2,6,6-
 tetrahydroquinoline)-1,1'-biphenyl as emitting material, double-layer and
 triple-layer electroluminescent (EL) devices were fabricated. For the device
 using tri(1-phenyl)-3-methyl-4-isobutyl-5-pyrazolotriphenylphosphine
 oxide (Tb(MPFI)₃(TPPO)₂) as the electron-transporting layer, blue EL
 devices with a maximum luminance of 253 cd/m² was achieved at 15 V. The
 efficiency of the devices was compared and discussed.
 20125765-1 CAPUS
 REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE AS FORMAT



US CITING REF COUNT: 0 THERE ARE 0 CAPUS RECORDS THAT CITE THIS RECORD
 REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE AS FORMAT
 111 NUMBER 57 OF 82 CAPUS COPYRIGHT 2010 ACS ON STM
 ACCESSION NUMBER: 2002125765 CAPUS Full-text
 DOCUMENT NUMBER: 13712523
 TITLE: Blue organic electroluminescent devices based on a
 diethylarylene derivative as emitting layer and a
 carboxyl complex as electron-transporting layer
 INVENTOR(S): Huang, Li-Ting; Wang, Chai-Rui
 CORPORATE SOURCE: Peking University, State Key Laboratory of Rare Earth
 Materials Chemistry and Applications, Beijing, 100073,
 Peop. Rep. China
 SOURCE: Journal of Luminescence (Jap.), 97(1), 55-59
 COUNTRY: CHINA; ISSN: 0022-2313
 PUBLISHER: Elsevier Science B.V.
 LANGUAGE: English
 AB With a blue diethylarylene derivative, 4,4'-bis(2,2,6,6-
 tetrahydroquinoline)-1,1'-biphenyl as emitting material, double-layer and
 triple-layer electroluminescent (EL) devices were fabricated. For the device
 using tri(1-phenyl)-3-methyl-4-isobutyl-5-pyrazolotriphenylphosphine
 oxide (Tb(MPFI)₃(TPPO)₂) as the electron-transporting layer, blue EL
 devices with a maximum luminance of 253 cd/m² was achieved at 15 V. The
 efficiency of the devices was compared and discussed.
 20125765-1 CAPUS
 REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE AS FORMAT

Alternating layers of different materials, one of which is an organic compound
 and another of which is an inorg. material, can be deposited using this
 method. High luminescent efficiency multi-layer films can be obtained
 207351-75-5 CAPUS
 Title: Terbutyl, tri(1-phenyl-3-methyl-4-isobutyl-5-pyrazolotriphenylphosphine
 oxide-w(1)) (CA INDEX NAME)
 207351-75-5 CAPUS
 Title: Terbutyl, tri(1-phenyl-3-methyl-4-isobutyl-5-pyrazolotriphenylphosphine
 oxide-w(1)) (CA INDEX NAME)
 207351-75-5 CAPUS
 Title: Terbutyl, tri(1-phenyl-3-methyl-4-isobutyl-5-pyrazolotriphenylphosphine
 oxide-w(1)) (CA INDEX NAME)

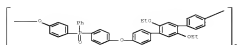


111 NUMBER 73 OF 82 CAPUS COPYRIGHT 2010 ACS ON STM
 ACCESSION NUMBER: 2002126465 CAPUS Full-text
 DOCUMENT NUMBER: 136126337
 TITLE: Alternating layers of organic and inorganic materials and
 devices comprising same
 INVENTOR(S): Hwang, Hong-Sung; Wang, Li-Duo
 PATENT ADDRESSEE(S): U.S. Pat. Appl., 21 pp.
 SOURCE: COUNTRY: USA
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC NUM COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002067235	A1	20020124	US 2001-08190	20010119 <-

PRIORITY APPLICATION INFO:
 ASSIGNMENT HISTORY FOR US PATENT AVAIL IN LISTS DISPLAY FORMAT
 AB Pinned layer deposition or thermal evaporation is used to deposit organic thin
 films, in particular of materials that are of interest to display
 applications. The films are deposited under vacuum using a hydroquinone derivative
 (Alq)₃ can be deposited without degradation of their luminescent properties.

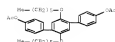
KH 371786-69-5 CAPLUS
 CN Poly[oxy-1,4-phenylene(phenylphosphinylidene)-1,4-phenyleneoxy(2',5'-diethoxy[1,1',4',1''-terphenyl]-4,4''-diyl)] (PCI) (CA INDEX NAME)



KH 371786-71-9 CAPLUS
 CN [1,1',4',1''-terphenyl]-4,4''-diol, 2',5'-bis(hexyloxy)-, diacetate, polymer with bis(4-fluorophenyl)phenylphosphine oxide (PCI) (CA INDEX NAME)

CM 1

CFH 371786-70-8
 CMF C34 B42 G6



CM 2

CFH 54300-32-2
 CMF C18 B13 F2 O P

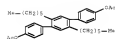


KH 371786-72-0 CAPLUS
 CN Poly[oxy-1,4-phenylene(phenylphosphinylidene)-1,4-phenyleneoxy(2',5'-bis(hexyloxy[1,1',4',1''-terphenyl]-4,4''-diyl)] (PCI) (CA INDEX NAME)

KH 371786-76-4 CAPLUS
 CN [1,1',4',1''-terphenyl]-4,4''-diol, 2',5'-bis(hexyloxy)-, diacetate, polymer with bis(4-fluorophenyl)phenylphosphine oxide (PCI) (CA INDEX NAME)

CM 1

CFH 371786-75-8
 CMF C34 B42 G4



CM 2

CFH 54300-32-2
 CMF C18 B13 F2 O P



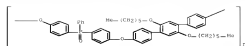
KH 371786-77-5 CAPLUS
 CN Poly[oxy-1,4-phenylene(phenylphosphinylidene)-1,4-phenyleneoxy(2',5'-dibutoxy[1,1',4',1''-terphenyl]-4,4''-diyl)] (PCI) (CA INDEX NAME)



KH 371786-78-6 CAPLUS
 CN [1,1',4',1''-terphenyl]-4,4''-diol, 2',5'-bis(hexyloxy)-, diacetate, polymer with bis(4-fluorophenyl)phenylphosphine oxide (PCI) (CA INDEX NAME)

CM 1

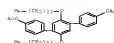
CFH 371786-66-2



KH 371786-74-2 CAPLUS
 CN [1,1',4',1''-terphenyl]-4,4''-diol, 2',5'-bis(hexyloxy)-, diacetate, polymer with bis(4-fluorophenyl)phenylphosphine oxide (PCI) (CA INDEX NAME)

CM 1

CFH 371786-73-1
 CMF C44 B44 G6

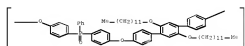


CM 2

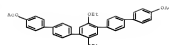
CFH 54300-32-2
 CMF C18 B13 F2 O P



KH 371786-75-3 CAPLUS
 CN Poly[oxy-1,4-phenylene(phenylphosphinylidene)-1,4-phenyleneoxy(2',5'-bis(hexyloxy[1,1',4',1''-terphenyl]-4,4''-diyl)] (PCI) (CA INDEX NAME)



CMF C38 B34 G6

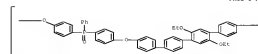


CM 2

CFH 54300-32-2
 CMF C18 B13 F2 O P



KH 371786-79-7 CAPLUS
 CN Poly[oxy-1,4-phenylene(phenylphosphinylidene)-1,4-phenyleneoxy(2',5'-diethoxy[1,1',4',1''-terphenyl]-4,4''-diyl)] (PCI) (CA INDEX NAME)



PAGE 1-A



PAGE 1-B

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IT      \x:\2-1-0-9-8
RL:    DESV (Device component use); USBS (Uses)
        (dendrimers and their production and electronic devices using them)
RN      315181-49-8 CAPLUS
CN      Terbilus, aquatris[4-[2,2-dimethyl-1-(oxo-KO)propyl]-2,6-dihydro-5-
        methyl-2-phenyl-3H-pyrazol-3-onato-KO3] [triphenylphosphine
```


RN 200292-99-5 CAPLIS
 CN Gadolinium, tris[4,4,4-trifluoro-1-(2-thienyl)-1,2-butanedionato-
 -KO,KO']bis(triphenylphosphine oxide-KO)- [PCI] (CA
 INDEX NAME)



CM Tetraam, aquatris[4-(2,2,6,6-tetramethyl-1-(iso- α -methyl-1,2,4,4-dihydro-5-methyl-2-phenyl-3,6-pyranal-3-ynato- κ^3)(triphenylphosphine oxide- κ^1)]- (CA INDEX NAME)



US CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 NUMBER 72 OF 82 CAPLUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 20001565834 CAPLUS [Full-Text](#)
134123226

TITLE: Red electrochromism from an organic europium complex with a triphenylphosphine oxide ligand

AUTHOR(S): Hu, Weiping; Matsumura, Michio; Wang, Mingzhou; Jin, Linyan

CORPORATE SOURCE: Research Center for Photochemistry of Organic Materials, Osaka University, Osaka, 560-0031, Japan

SOURCE: Japanese Journal of Applied Physics, Part 1: Regular Papers, Short Notes & Review Papers (2000), 39(11), 6445-6449

PUBLISHER: JAPANESE JOURNAL OF APPLIED PHYSICS

LANGUAGE: English

AB An Eu-complex, Eu tris(4-benzoylmethylene) (triphenylphosphine oxide), was newly synthesized and used as a π -conjugated material in electrochromic devices. The complex was easily deposited as transparent and homogeneous thin films by vacuum sublimation and was successfully applied to electrochromic devices with a stacked structure of Zn-metal/ITO/poly(ethylene oxide)/Eu-complex layer/hole blocking layer/Aluminum transporting layer/cathode. The device with this structure gave off pure red light with maximum 532 nm. The hole blocking layer was made of poly(ethylene oxide) and red light from this Eu-complex. Without the hole-blocking layer, holes passed through the Eu-complex layer and entered into the electron transporting layer, leading to yellow emission.

IT 16175-18192

CODEN: JCLCDS ISSN: 1039-1254
PUBLISHER: Gordon & Breach Science Publishers
DOCUMENT TYPE: Journal

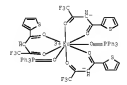
LANGUAGE: English

AB A novel Eu complex, Eu(TTA)(TPPO) was synthesized and its photoluminescent and electrochromic characteristics were studied with a device structure of ITO/TPPO/Eu(TTA)(TPPO)/Alq/Al, where a sharp emission at the wavelength of 615 nm was observed

IT 23151-61

AB ML DEV (Device component use) PEP (Physical, engineering or chemical process) PEP (Properties) PPOC (Process) DES (Uses) (Technical and elec. properties of poly(arylene ether)s containing hole-transport moieties from an inorganic masked biphenol)

CM European, tri[4,4',4-trifluoro-1-(2-thienyl)-1,3-butadienato- κ^1] κ^3 bitriphenylphosphine oxide- κ^1 (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 NUMBER 73 OF 82 CAPLUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 20001521367 CAPLUS [Full-Text](#)
133122516

TITLE: Synthesis of poly(arylene ether)s containing hole-transport moieties from an inorganic masked biphenol

AUTHOR(S): Xu, Jiansheng; Hill, Andrew R.; Hup, Allen J.; Maitino, Tony; Dabner, Jean-Boly; Lee, Jennifer; Poirier, Marie

CORPORATE SOURCE: Department of Chemistry, McGill University, Montreal, QC, H3A 2K6, Can

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (2000), 38(15), 2160-2168

PUBLISHER: JAPANESE JOURNAL OF APPLIED PHYSICS

LANGUAGE: English

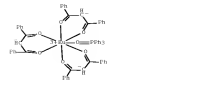
AB The design and synthesis of a series of hole-transport materials have been the focus of much research in recent years because of their wide variety of applications. In this study, three high mol. weight poly(arylene ether)s, P_{HET} , containing naphthyl-substituted benzidine moieties have been synthesized from two carbamate derived from biphenols. After masking

ML DEV (Device component use) PEP (Properties) SYN (Synthetic preparation) PPOC (Preparation) DES (Uses) (Synthesis and red π -conjugation of organic europium complex with triphenylphosphine oxide ligand)

CM 161735-26-4 CAPLUS
European, tri[4,4'-diphenyl-1,3-propanediato- κ^1] κ^3 bitriphenylphosphine oxide- κ^1 (CA INDEX NAME)

IT 71-76-6, Triphenylphosphine oxide
ML: PCT (Patent) PACT (Patent or request) (Synthesis of organic europium complex with triphenylphosphine oxide ligand using)

CM 71-76-6 CAPLUS
CM Phosphine oxide, triphenyl- (CA INDEX NAME)



US CITING REF COUNT: 37 THERE ARE 37 CAPLUS RECORDS THAT CITE THIS RECORD (37 CITINGS)

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 NUMBER 72 OF 82 CAPLUS COPYRIGHT 2010 ACS on STM
ACCESSION NUMBER: 2000156515 CAPLUS [Full-Text](#)
134170166

TITLE: Study on the optical and electrical properties of Eu complex in organic electroluminescent devices

AUTHOR(S): Lee, Sang Pil; Kim, Jun Ho; Lee, Han Dong; Kim, Jung Hoon; Kim, Young Hoon; No, Hyun Yoon; Lee, Young Hee; Zyung, Tae Hyoung

CORPORATE SOURCE: Department of Electrical & Computer Engineering, Seoul National University, Seoul, 151-747, S. Korea

SOURCE: Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (2000), 349, 409-412

PUBLISHER: MOLECULAR CRYSTALS AND LIQUID CRYSTALS

LANGUAGE: English

with Fr inorganic, the carbamate is stable, can be readily purified by recrystallization from toluene, and can be polymerized directly with difluoro borane under mild conditions. The resulting polymers possess high glass-transition temps., excellent thermal stability, and good film-forming properties. In comparison, the poly(arylene ether)s $6a'$ - $6c'$, synthesized from unprotected biphenol, have lower mol. wt. and wider polydispersity and contain more brown impurities. Preliminary exper. show that both $6a$ and $6a'$ can function well as hole-transport materials in π -conjugated diodes.

IT 20151-67-16

AB ML DEV (Properties) SYN (Synthetic preparation) TEP (Technical or engineered material use) PPOC (Preparation) DES (Uses) (Synthesis of poly(arylene ether)s containing hole-transport moieties from an inorganic masked biphenol)

CM 2-Phenylphenol, 6,6'-[1,1'-biphenyl-4,4'-diylbis(phenylamino)]bis-, polymer with bis(4-fluorophenyl)phenylphosphine oxide (PCT) (CA INDEX NAME)

CM 3

CM 20015-93-9
CMF C44 H32 N2 O2



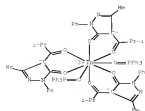
CM 2

CM 20015-32-0
CMF C18 H15 F2 O F



CM 20015-98-4 CAPLUS
CM Poly[arylene-1,8-phenylene(biphenyl)phenylene]-1,4-phenylene-2,6-naphthalenediyl(biphenyl)bis(1,1'-biphenyl)-4,4'-diyl(phenylamino)-2,6-naphthalenediyl] (PCT) (CA INDEX NAME)

phenyl-3H-pyrazol-3-one- κ^3]bis(triphenylphosphine
oxide- κ^1)- (CA INDEX NAME)



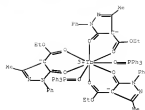
KN 223262-01-9 CAPLUS

CM Terbiu, tris[4-(oxazol-5-yl)-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-one- κ^3]bis(triphenylphosphine oxide- κ^1)- (CA INDEX NAME)



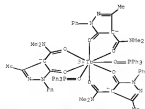
KN 223262-02-0 CAPLUS

CM Terbiu, tris[2,4-dihydro-5-methyl-6-[1-(oxo- κ^1)propyl]-2-phenyl-3H-pyrazol-3-one- κ^3]bis(triphenylphosphine oxide- κ^1)- (CA INDEX NAME)



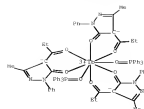
KN 223262-06-6 CAPLUS

CM Terbiu, tris[4,5-dihydro-6H,7,3-trimethyl-3-(oxo- κ^1)-1-phenyl-1H-pyrazol-4-carboxylato- κ^3]bis(triphenylphosphine oxide- κ^1)- (SC1) (CA INDEX NAME)



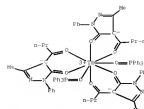
KN 223262-07-5 CAPLUS

CM Terbiu, tris[4,5-dihydro-6H,7,3-trimethyl-3-(oxo- κ^1)-6H,1-triphenyl-1H-pyrazol-6-carboxylato- κ^3]bis(triphenylphosphine oxide- κ^1)- (SC1) (CA INDEX NAME)



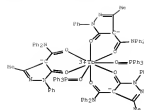
KN 223262-03-1 CAPLUS

CM Terbiu, tris[2,4-dihydro-5-methyl-6-[1-(oxo- κ^1)butyl]-2-phenyl-3H-pyrazol-3-one- κ^3]bis(triphenylphosphine oxide- κ^1)- (CA INDEX NAME)



KN 223262-04-2 CAPLUS

CM Terbiu, tris[ethyl 4,5-dihydro-3-methyl-5-(oxo- κ^1)-1-phenyl-1H-pyrazol-4-carboxylato- κ^3]bis(triphenylphosphine oxide- κ^1)- (SC1) (CA INDEX NAME)



KN 223262-08-6 CAPLUS

CM Terbiu, tris[2,4-dihydro-5-methyl-6-(4-methylbenzoyl)-2-phenyl-3H-pyrazol-3-one- κ^3]bis(triphenylphosphine oxide- κ^1)- (CA INDEX NAME)

PAGE 1-A

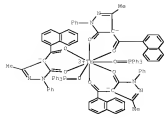
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PAGE 2-A

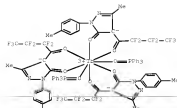
KN 223262-09-7 CAPLUS

CM Terbiu, tris[2,4-dihydro-5-methyl-6-(1-naphthalenylacetyl)- κ^1]-

phenyl-30-pyrazol-3-onato- κ^3 bia(triphenylphosphine
oxide- κ^1)- (9C1) (CA INDEX NAME)



22382-10-0 CAPUS
Tetrahedral, tri[4-(2,2,2,2,4,4,6-hexafluoro-1-oxo- κ^1 butyl)-2,4-dihydro-5-methyl-2-(2-methylphenyl)-30-pyrazol-3-onato- κ^3 bia(triphenylphosphine oxide- κ^1)- (CA INDEX NAME)



OS CITING REF COUNT: 36 THERE ARE 36 CAPUS RECORDS THAT CITE THIS RECORD (16 CITINGS)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 NUMBER 76 OF 82 CAPUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 1991164729 CAPUS FULLTEXT
DOCUMENT NUMBER: 130145586
ORIGINAL REFERENCE NO.: 12942129, 21264
TITLE: Electroluminescence from both a

OS CITING REF COUNT: 11 THERE ARE 11 CAPUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

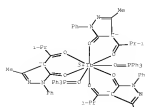
L11 NUMBER 77 OF 82 CAPUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 1991164729 CAPUS FULLTEXT
DOCUMENT NUMBER: 12915142
ORIGINAL REFERENCE NO.: 12942129, 21264
TITLE: Electroluminescence of a novel terbium complex

AUTHOR(S): Bao, X. C.; Cao, Hong Huang, Chunhui Li, Shaoqun
CORPORATE SOURCE: State Key Laboratory of Rare Earth Materials Chemistry and Applications, Peking University, Beijing, 100871, P.R. China
SOURCE: Applied Physics Letters (1990), 72(18), 2217-2219
CODEN: APPLAB; ISSN: 0003-6951
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The authors describe the efficient electroluminescence from a Tb complex, tri[4-(1-phenyl-3-methyl-2-(2-methylphenyl)-30-pyrazol-3-onato- κ^3 bia(triphenylphosphine oxide)10 (PTT) The green-emitting material possesses much higher photoluminescence efficiency compared to the commonly used green light emitter, 8-hydroxyquinoline Al (Alq) The rarely observed emission from the hole transport layer, N,N'-bis[2-methylphenyl]-N,N'-diphenylbenzidine (TPD) of the device TPD/PTT/Alq proves the PTT also is a good electricity transporting material The TPD/PTT/Alq device shows luminance up to 920 cd/m² at a drive voltage of 18 V and a luminous efficiency of 0.51 lm/w at a c.d. of 0.70 mA/cm², which are up to now the highest among devices using rare-earth complex materials as emitters

IT 21221-1-1
RE DEV (Device component use) US\$ (Data)
RE DEV (Device component use) US\$ (Data)

203751-75-5 CAPUS
Terbium, tri[2,4-dihydro-5-methyl-4-(2-methyl-1-oxo- κ^1 propyl)-2-phenyl-30-pyrazol-3-onato- κ^3 bia(triphenylphosphine oxide- κ^1)- (CA INDEX NAME)



OS CITING REF COUNT: 11 THERE ARE 11 CAPUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 NUMBER 78 OF 82 CAPUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 1991164729 CAPUS FULLTEXT
DOCUMENT NUMBER: 12847944
ORIGINAL REFERENCE NO.: 12913178, 13178
TITLE: Temperature-dependent electroluminescence from Cu(I) coordination complexes
AUTHOR(S): Zhang, Xianmin Sun, Rongqiang Shen, Qianqiang Gohongyi, Takahashi, Iri, Wenlian
CORPORATE SOURCE: Graduate School of Science, Department of Physics, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo, 113, Japan
SOURCE: Applied Physics Letters (1997), 71(18), 2586-2588
CODEN: APPLAB; ISSN: 0003-6951
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Light emission from single-electroluminescence devices is described in which Cu(I) coordination complexes, Cu(dppf)2(PTT) and Cu(dppf)2(PTT)2, and electron transport material azobenzene derivative, 2-(4-biphenyl)-5-(4-biphenyl)-1,3,4-oxadiazole, are dispersed in a hole-transporting host polymer poly(bis-vinylcarbazole) film. The color of the emitted electroluminescence changes smoothly from green-white to red with temperature varying from 77 to 300 K This phenomenon is discussed in terms of temperature dependent yields of phosphorescence from the triplet state of the 6d and 3d orbitals and the internal energy transfer from Cu-d to Cu-L to Cu-L to Cu-L

IT 203751-75-5 CAPUS
Terbium, tri[2,4-dihydro-5-methyl-4-(2-methyl-1-oxo- κ^1 propyl)-2-phenyl-30-pyrazol-3-onato- κ^3 bia(triphenylphosphine oxide- κ^1)- (CA INDEX NAME)

OS CITING REF COUNT: 11 THERE ARE 11 CAPUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
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ACCESSION NUMBER: 1991164729 CAPUS FULLTEXT
DOCUMENT NUMBER: 12847944
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TITLE: Temperature-dependent electroluminescence from Cu(I) coordination complexes

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IT 203751-75-5 CAPUS
Terbium, tri[2,4-dihydro-5-methyl-4-(2-methyl-1-oxo- κ^1 propyl)-2-phenyl-30-pyrazol-3-onato- κ^3 bia(triphenylphosphine oxide- κ^1)- (CA INDEX NAME)

OS CITING REF COUNT: 11 THERE ARE 11 CAPUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 NUMBER 80 OF 82 CAPUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 1991164729 CAPUS FULLTEXT
DOCUMENT NUMBER: 12847944
ORIGINAL REFERENCE NO.: 12913178, 13178
TITLE: Temperature-dependent electroluminescence from Cu(I) coordination complexes

AUTHOR(S): Zhang, Xianmin Sun, Rongqiang Shen, Qianqiang Gohongyi, Takahashi, Iri, Wenlian
CORPORATE SOURCE: Graduate School of Science, Department of Physics, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo, 113, Japan
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CODEN: APPLAB; ISSN: 0003-6951
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English

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IT 203751-75-5 CAPUS
Terbium, tri[2,4-dihydro-5-methyl-4-(2-methyl-1-oxo- κ^1 propyl)-2-phenyl-30-pyrazol-3-onato- κ^3 bia(triphenylphosphine oxide- κ^1)- (CA INDEX NAME)

OS CITING REF COUNT: 11 THERE ARE 11 CAPUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 NUMBER 81 OF 82 CAPUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 1991164729 CAPUS FULLTEXT
DOCUMENT NUMBER: 12847944
ORIGINAL REFERENCE NO.: 12913178, 13178
TITLE: Temperature-dependent electroluminescence from Cu(I) coordination complexes

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IT 203751-75-5 CAPUS
Terbium, tri[2,4-dihydro-5-methyl-4-(2-methyl-1-oxo- κ^1 propyl)-2-phenyl-30-pyrazol-3-onato- κ^3 bia(triphenylphosphine oxide- κ^1)- (CA INDEX NAME)

OS CITING REF COUNT: 11 THERE ARE 11 CAPUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
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L11 NUMBER 82 OF 82 CAPUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 1991164729 CAPUS FULLTEXT
DOCUMENT NUMBER: 12847944
ORIGINAL REFERENCE NO.: 12913178, 13178
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IT 203751-75-5 CAPUS
Terbium, tri[2,4-dihydro-5-methyl-4-(2-methyl-1-oxo- κ^1 propyl)-2-phenyl-30-pyrazol-3-onato- κ^3 bia(triphenylphosphine oxide- κ^1)- (CA INDEX NAME)

OS CITING REF COUNT: 11 THERE ARE 11 CAPUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 NUMBER 83 OF 82 CAPUS COPYRIGHT 2010 ACS ON STM
ACCESSION NUMBER: 1991164729 CAPUS FULLTEXT
DOCUMENT NUMBER: 12847944
ORIGINAL REFERENCE NO.: 12913178, 13178
TITLE: Temperature-dependent electroluminescence from Cu(I) coordination complexes

AUTHOR(S): Zhang, Xianmin Sun, Rongqiang Shen, Qianqiang Gohongyi, Takahashi, Iri, Wenlian
CORPORATE SOURCE: Graduate School of Science, Department of Physics, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo, 113, Japan
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CODEN: APPLAB; ISSN: 0003-6951
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English

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IT 203751-75-5 CAPUS
Terbium, tri[2,4-dihydro-5-methyl-4-(2-methyl-1-oxo- κ^1 propyl)-2-phenyl-30-pyrazol-3-onato- κ^3 bia(triphenylphosphine oxide- κ^1)- (CA INDEX NAME)

11 NUMBER 81 OF 82 CAPS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 1992:02238 CAPS FULL TEXT
 DOCUMENT NUMBER: 9711212
 ORIGINAL REFERENCE NO.: 115509a,1912a
 CHEMICAL ABSTRACTS: 115509a, 115509b, 115509c, 115509d, 115509e, 115509f, 115509g, 115509h, 115509i, 115509j, 115509k, 115509l, 115509m, 115509n, 115509o, 115509p, 115509q, 115509r, 115509s, 115509t, 115509u, 115509v, 115509w, 115509x, 115509y, 115509z, 115510a, 115510b, 115510c, 115510d, 115510e, 115510f, 115510g, 115510h, 115510i, 115510j, 115510k, 115510l, 115510m, 115510n, 115510o, 115510p, 115510q, 115510r, 115510s, 115510t, 115510u, 115510v, 115510w, 115510x, 115510y, 115510z, 115511a, 115511b, 115511c, 115511d, 115511e, 115511f, 115511g, 115511h, 115511i, 115511j, 115511k, 115511l, 115511m, 115511n, 115511o, 115511p, 115511q, 115511r, 115511s, 115511t, 115511u, 115511v, 115511w, 115511x, 115511y, 115511z, 115512a, 115512b, 115512c, 115512d, 115512e, 115512f, 115512g, 115512h, 115512i, 115512j, 115512k, 115512l, 115512m, 115512n, 115512o, 115512p, 115512q, 115512r, 115512s, 115512t, 115512u, 115512v, 115512w, 115512x, 115512y, 115512z, 115513a, 115513b, 115513c, 115513d, 115513e, 115513f, 115513g, 115513h, 115513i, 115513j, 115513k, 115513l, 115513m, 115513n, 115513o, 115513p, 115513q, 115513r, 115513s, 115513t, 115513u, 115513v, 115513w, 115513x, 115513y, 115513z, 115514a, 115514b, 115514c, 115514d, 115514e, 115514f, 115514g, 115514h, 115514i, 115514j, 115514k, 115514l, 115514m, 115514n, 115514o, 115514p, 115514q, 115514r, 115514s, 115514t, 115514u, 115514v, 115514w, 115514x, 115514y, 115514z, 115515a, 115515b, 115515c, 115515d, 115515e, 115515f, 115515g, 115515h, 115515i, 115515j, 115515k, 115515l, 115515m, 115515n, 115515o, 115515p, 115515q, 115515r, 115515s, 115515t, 115515u, 115515v, 115515w, 115515x, 115515y, 115515z, 115516a, 115516b, 115516c, 115516d, 115516e, 115516f, 115516g, 115516h, 115516i, 115516j, 115516k, 115516l, 115516m, 115516n, 115516o, 115516p, 115516q, 115516r, 115516s, 115516t, 115516u, 115516v, 115516w, 115516x, 115516y, 115516z, 115517a, 115517b, 115517c, 115517d, 115517e, 115517f, 115517g, 115517h, 115517i, 115517j, 115517k, 115517l, 115517m, 115517n, 115517o, 115517p, 115517q, 115517r, 115517s, 115517t, 115517u, 115517v, 115517w, 115517x, 115517y, 115517z, 115518a, 115518b, 115518c, 115518d, 115518e, 115518f, 115518g, 115518h, 115518i, 115518j, 115518k, 115518l, 115518m, 115518n, 115518o, 115518p, 115518q, 115518r, 115518s, 115518t, 115518u, 115518v, 115518w, 115518x, 115518y, 115518z, 115519a, 115519b, 115519c, 115519d, 115519e, 115519f, 115519g, 115519h, 115519i, 115519j, 115519k, 115519l, 115519m, 115519n, 115519o, 115519p, 115519q, 115519r, 115519s, 115519t, 115519u, 115519v, 115519w, 115519x, 115519y, 115519z, 115520a, 115520b, 115520c, 115520d, 115520e, 115520f, 115520g, 115520h, 115520i, 115520j, 115520k, 115520l, 115520m, 115520n, 115520o, 115520p, 115520q, 115520r, 115520s, 115520t, 115520u, 115520v, 115520w, 115520x, 115520y, 115520z, 115521a, 115521b, 115521c, 115521d, 115521e, 115521f, 115521g, 115521h, 115521i, 115521j, 115521k, 115521l, 115521m, 115521n, 115521o, 115521p, 115521q, 115521r, 115521s, 115521t, 115521u, 115521v, 115521w, 115521x, 115521y, 115521z, 115522a, 115522b, 115522c, 115522d, 115522e, 115522f, 115522g, 115522h, 115522i, 115522j, 115522k, 115522l, 115522m, 115522n, 115522o, 115522p, 115522q, 115522r, 115522s, 115522t, 115522u, 115522v, 115522w, 115522x, 115522y, 115522z, 115523a, 115523b, 115523c, 115523d, 115523e, 115523f, 115523g, 115523h, 115523i, 115523j, 115523k, 115523l, 115523m, 115523n, 115523o, 115523p, 115523q, 115523r, 115523s, 115523t, 115523u, 115523v, 115523w, 115523x, 115523y, 115523z, 115524a, 115524b, 115524c, 115524d, 115524e, 115524f, 115524g, 115524h, 115524i, 115524j, 115524k, 115524l, 115524m, 115524n, 115524o, 115524p, 115524q, 115524r, 115524s, 115524t, 115524u, 115524v, 115524w, 115524x, 115524y, 115524z, 115525a, 115525b, 115525c, 115525d, 115525e, 115525f, 115525g, 115525h, 115525i, 115525j, 115525k, 115525l, 115525m, 115525n, 115525o, 115525p, 115525q, 115525r, 115525s, 115525t, 115525u, 115525v, 115525w, 115525x, 115525y, 115525z, 115526a, 115526b,

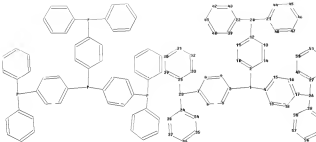
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# Executing the logoff script

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[illegible]

---Logging off of STN---



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  28 28 30 25
  run nodes {
    7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 25 27
    28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
    49 50 51
    52 53 54 55 56 57 58
  }
  chain nodes {
    7-23 12-20 17-26 20-21 20-22 23-24 35-36 26-27 26-28
  }
  run nodes {
    4-5 6-7 8-9 10-11 11-12 13-14 13-14
    15-16 17-18 18-19 21-23 24-25 26-27 28-24 26-28 25-29 25-31
    29-40 25-51
    29-30 30-31 31-32 33-34 34-35 35-36 36-37 37-38 39-40 40-41
    41-42 42-43 44-45
    46-48 49-50 51-52 53-54 54-55 55-56 56-57 57-58
  }
  exact nodes {
    7-23 12-20 17-26 20-21 20-22 23-24 35-36 26-27 26-28
  }
  nonrepeated nodes {
    4-5 6-7 8-9 10-11 11-12 13-14 13-14
    15-16 17-18 17-18 19-21 21-24 21-26 6-7 8-9 10-11 11-12 22-23 25-31
    27-49 27-50
    29-30 30-31 31-32 33-34 34-35 35-36 36-37 37-38 39-40 40-41
    41-42 42-43 44-45
    46-48 49-50 51-52 53-54 54-55 55-56 56-57 57-58
  }
}

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Mesh level :
1:CLASS= 2:Atom 3:Atoms 4:Atoms 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:CLASS= 21:Atom 22:Atom 23:Atom 24:Atom 25:Atom 26:CLASS 27:Atom 28:Atom 29:Atom 30:Atom
31:Atom 32:Atom 33:Atom 34:Atom 35:Atom 36:Atom 37:Atom 38:Atom 39:Atom 40:Atom 41:Atom
42:Atom 43:Atom 44:Atom 45:Atom 46:Atom 47:Atom 48:Atom 49:Atom 50:Atom 51:Atom 52:Atom
53:Atom 54:Atom 55:Atom 56:Atom 57:Atom 58:Atom

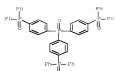
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7 FILE 'REGISTRY' ENTERED AT 08:37:57 ON 26 MAR 2010
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9 1 SEA FILE=REGISTRY SGS FUL L1
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11 FILE 'CPLUS' ENTERED AT 08:38:26 ON 26 MAR 2010
12 1 SEA FILE=CPLUS SECON AMB-ON FULM-L0 L2
13 D INR AM HISTO 1-
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16 STRUCTURE LOADED
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21 D INR AM HISTO 1-
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24 STRUCTURE LOADED
25 943 SEA FILE=REGISTRY SGS FUL L7
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28 7517 SEA FILE=CPLUS SECON AMB-ON FULM-L0 L2
29 166 SEA FILE=CPLUS SECON AMB-ON FULM-L0 L3 AND (ELECTROGRAMMER
30 AND (ELECTROGRAMMER) (LIGHT EDITTED) OR (CZC)
31 82 SEA FILE=CPLUS SECON AMB-ON FULM-L10 AND (F7C=2005 OR
32 A9=2005)
33 D INR AM HISTO 1-

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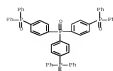



LI NUMBER 2 OF 6 CAPSULE COPYRIGHT 2010 ACT ON STM
ACCESSION NUMBER: 20071119967 CAPSULE PUBLIC
DOCUMENT NUMBER: 147436473
TITLE: Organic-inorganic composite semiconductor material,
liquid material, organic light emitting element,
method of manufacturing organic light emitting
element, light emitting device and electronic
apparatus
INVENTOR(S): Nakamura, Hisa; Okuyama, Tsuyoshi; Kawanishi, Tetsuo; Noto,
Kikunobu; Hayashida, Tsuyoshi; Otsu, Tsuyoshi
PATENT ADDRESSEE(S): Seiko Epson Corporation, Japan; Dyden Corporation
Dyden Electric Power Company, Incorporated
SOURCE: U.S. Pat. Appl. Publ., 20pp
COUNTRY: JAPAN
LANGUAGE: English
FAMILY ACC. NUM. COUNTRY: JAPAN
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20070228356	A1	20071004	US 2007-491832	20070327
JP 200701019	A	20071025	JP 2006-102056	20060403
JP 4273112	B2	20090603		
CR 16105924	A	20071017	CR 2007-10092166	20070402
HR 200709474	A	20071009	HR 2007-32795	20070403
JP 200915510	A	20090618	JP 2008-335500	20081227
			JP 2006-102056	A 20060403

PRIORITY APPL. INFO.: JP 2006-102056 A
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LISTS DISPLAY FORMAT
OTHER SOURCE(S): MOPAT 147436473
AD TRANSFER-IN: composite semiconductor material including material mainly made
of at least one kind of a metal ion selected from an alkali metal ion,
an alkali earth metal ion and a rare-earth metal ion, and a chemical compound
represented by the following general formula (A1) (A2) (A3) (A4), where Ar1,
Ar2 and Ar3 are each independently an aromatic ring group that optionally has
a substituent group is described. An organic light emitting element
comprising an electron transport film comprising the organic-inorganic composite
material is also described. A liquid material comprising a metal compound and
the organic-inorganic composite material is also described. A method of
manufacturing the organic light emitting element is also described.
27 (63)(3)(b)-3
RI: TM (Technical or engineered material use) USES (Uses)
[electron transport layer, organic-inorganic composite semiconductor
material, liquid material, organic light emitting element, method of

manufacturing
organic light emitting element)
EN 969520-14-3 CAPSULE
CN Phosphine oxide, tris[4-(diphenylphosphoryl)phenyl]- (CA INDEX NAME)



LI NUMBER 3 OF 6 CAPSULE COPYRIGHT 2010 ACT ON STM
ACCESSION NUMBER: 20051110949 CAPSULE PUBLIC
DOCUMENT NUMBER: 143449039
TITLE: Organic compound containing phosphorus used in organic
electroluminescent device and its preparation
INVENTOR(S): Otsu, Tsuyoshi; Noto, Kikunobu; Hayashida, Tsuyoshi
PATENT ADDRESSEE(S): Dyden Electric Power Co., Inc., Japan; Dyden Co.,
Ltd.
SOURCE: PCT Int. Appl., 63 pp.
COUNTRY: JAPAN
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNTRY: JAPAN
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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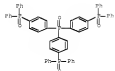
WO 200510428	A1	20051103	WO 2005-37351	20050420
AR 1486	A1	20051103	AR 2005-07351	20050420
BR 0501017	A1	20051103	BR 2005-07351	20050420
CA 2511156	A	20051103	CA 2511156	20050420
CH 10012946	C	20051103	CH 10012946	20050420
DE 10012946	C	20051103	DE 10012946	20050420
EP 1474362	A1	20051103	EP 1474362	20050420
FR 2891156	A	20051103	FR 2891156	20050420
GB 2511156	A	20051103	GB 2511156	20050420
HR 200511545	A	20051103	HR 2005-11545	20050420
JP 2007029505	A	20071220	JP 2007-599334	20070528

PRIORITY APPL. INFO.: JP 2004-124712 A 20040420
WO 2005-37351 A 20050420
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LISTS DISPLAY FORMAT
OTHER SOURCE(S): MOPAT 143449039

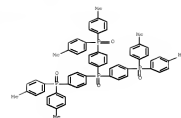
AD The invention relates to an organic electroluminescent device provided with a
plurality of organic compound layers sandwiched between an anode and a
cathode. The organic electroluminescent device is provided with a hole
transporting layer composed of an organic compound layer, in alic. solvents,
and an electron transporting layer formed on the hole transporting layer by a
wet method. The material of the electron transporting layer is an organic
compound which contains phosphorus and soluble in alic. solvents. A method for
manufacturing the organic electroluminescent device, the organic compound
containing phosphorus and a method for manufacturing such compound are also
provided.

27 (63)(3)(b)-3
RI: DEV (Device component use) PROP (Properties); SYN (Synthetic
preparation); PREP (Preparation); USES (Uses)
[organic compound containing phosphorus used in organic electroluminescent
device and its preparation]

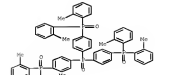
EN 969520-14-3 CAPSULE
CN Phosphine oxide, tris[4-(bis[2-methylphenyl]phosphanyl)phenyl]- (CA INDEX NAME)



27 (63)(3)(b)-3
RI: PRE (Properties); SYN (Synthetic preparation); PREP (Preparation)
[organic compound containing phosphorus used in organic electroluminescent
device and its preparation]
EN 969520-14-3 CAPSULE
CN Phosphine oxide, tris[4-(bis[4-methylphenyl]phosphanyl)phenyl]- (CA INDEX NAME)



EN 969520-14-3 CAPSULE
CN Phosphine oxide, tris[4-(bis[2-methylphenyl]phosphanyl)phenyl]- (CA INDEX NAME)



EN 969520-14-3 CAPSULE
CN Phosphine oxide, tris[4-(bis[4-methylphenyl]phosphanyl)phenyl]- (CA INDEX NAME)

RN 620630-59-3 CAPLUS
 CN Fluorophore, triis[4-[(3-methylphenyl)phenylphosphino]phenyl]- (CA INDEX NAME)

